DOCUMENT RESUME

ED 183 878 CE 024 498

AUTHOR Adams, Kay Angona; Walker, Gerry P.
TITLE Career Education Measurement Handbooks. Improving the Accountability of Career Education Programs: Evaluation Guidelines and Checklists. Research & Development Series No. 168.
INSTITUTION Ohio State Univ., Columbus. National Center for Research in Vocational Education.
SPONS AGENCY National Inst. of Education (DHEW), Washington, D.C.
PUB DATE 79
CONTRACT NE-C-00-3-0079
NOTE 103p.; For related documents see CE 024 495-499.
AVAILABLE FROM National Center Publications, The National Center for Research in Vocational Education, The Ohio State University, 1960 Kenny Road, Columbus, OH 43210 ($6.75; $30.00 for complete set).

EDRS PRICE MF01/PC05 Plus Postage.
DESCRIPTORS *Accountability; *Career Education; Educational Assessment; *Evaluation; Guidelines; Information Utilization; Measures (Individuals); Program Development; Program Implementation; *Program Improvement

ABSTRACT

This document is the fourth volume in a set of five Career Education Measurement Handbooks intended to help local education personnel in measurement and evaluation. Divided into thirteen units, this handbook is designed to show how evaluation can help improve the accountability of career education programs. Each unit is written to stand alone, and they are organized into a logical sequence from planning and implementing to using evaluation. An overview of the organization of the handbook precedes the first eight units, which are categorized under the topic Planning Evaluation. These units cover the following elements: purpose, audience, questions, process, staff, responsbility/authority, uniqueness, and planning standards. Unit 9 is included in the section called Implementing the Evaluation and includes an instrument checklist for rating an evaluation instrument against standard criteria. Units 10-13 are organized under the topic of Communicating and Using Evaluation Results. These units cover politics, report standards, dissemination, and use. A selected bibliography is included. (RM)

****
* Reproductions supplied by EDRS are the best that can be made *
* from the original document. *
****

Research & Development Series No. 188

CAREER EDUCATION MEASUREMENT HANDBOOKS.

IMPROVING THE ACCOUNTABILITY OF CAREER EDUCATION PROGRAMS:

Evaluation Guidelines and Checklists

Kay Angona Adams

Jerry P. Walker

The National Center for Research in Vocational Education
The Ohio State University
Columbus, Ohio

1979

U S DEPARTMENT OF HEALTH, EDUCATION & WELFARE
NATIONAL INSTITUTE OF EDUCATION

THIS DOCUMENT HAS BEEN REPRODUCED EXACTLY AS RECEIVED FROM THE PERSON OR ORGANIZATION ORIGINATING IT. POINTS OF VIEW OR OPINIONS STATED DO NOT NECESSARILY REPRESENT OFFICIAL NATIONAL INSTITUTE OF EDUCATION POSITION OR POLICY

THE NATIONAL CENTER MISSION STATEMENT

The National Center for Research in Vocational Education's mission is to increase the ability of diverse agencies, institutions, and organizations to solve educational problems relating to individual career planning, preparation, and progression. The National Center fulfills its mission by:

- Generating knowledge through research
- Developing educational programs and products
- Evaluating individual program needs and outcomes
- Installing educational programs and products
- Operating information systems and services
- Conducting leadership development and training programs

The work upon which this publication is based was performed pursuant to Contract NE-C-00-3-0079 with the National Institute of Education, Department of Health, Education, and Welfare. Contractors undertaking such projects under government sponsorship are encouraged to freely express their judgement in professional and technical matters. Points of view or opinions do not, therefore, necessarily represent official National Institute of Education position or policy.

U.S. DEPARTMENT OF
HEALTH, EDUCATION, AND WELFARE

National Institute of Education

FOREWORD

Educators have often been criticized for viewing their role merely as dispensers of knowledge and for showing a lack of concern with the application of this knowledge to their students' future lives. However, the general public has begun to accept the idea that the educational system has a responsibility to assist *all* individuals in making orderly transitions to the world of work. Additionally, during the last decade, a number of innovative activities, projects, and programs have been developed at the federal, state, and local level in which personnel are attempting to link education and work. Among these programs and projects are the following examples: career education, Experience-Based Career Education (EBCE), Part D exemplary projects and other projects in vocational education, Title IV-C of the Elementary and Secondary Education Act (ESEA), Fund for the Improvement of Post Secondary Education (FIPSE), and Title I and III of the Comprehensive Employment and Training Act (CETA).

Personnel associated with education and work programs are becoming increasingly aware of the need for information related to accountability and needed improvements. Many reports—some informal, some in the literature—indicate a wide and exciting variety of approaches to evaluating programs that link education and work. However, the need exists for practitioners to become acquainted with evaluation ideas and materials available for particular situations.

Recognizing these trends, the Education and Work Group of the National Institute of Education (NIE) contracted with the National Center for Research in Vocational Education (NCRVE) to develop the *Career Education Measurement Series.* The series includes five comprehensive "user oriented" handbooks intended to help local education personnel in measurement and evaluation. The handbooks in the series are:

- *Assessing Experiential Learning in Career Education*
- *Career Education Measures. A Compendium of Evaluation Instruments*
- *Improving the Accountability of Career Education Programs: Evaluation Guidelines and Checklists*
- *A Guide for Improving Locally Developed Career Education Measures*
- *Using Systematic Observation Techniques in Evaluating Career Education*

This handbook, "Improving the Accountability of Career Education Programs: Evaluation Guidelines and Checklists," is designed to help practitioners plan, implement, and use the results from evaluation to make career education programs more accountable. The handbook provides checklists for reviewing your own evaluation plans, instruments, and reports.

The Center is particularly indebted to Dr. Kay A. Adams, Evaluation Specialist, and Dr. Jerry P. Walker, Associate Director for Evaluation, who prepared this document. Special recognition should be given to Dr. N. L. McCaslin, Project Director, for reviewing versions of the manuscript during development and for coordinating user trials. Thanks are extended to Michael Neuman for his excellent editorial review.

A special note of thanks is extended to Dr. Ronald Bucknam who originally conceived this handbook series and continued his involvement through their development as Project Officer for the National Institute of Education. Valuable advice in the design and scope of the handbook series was received from an advisory committee composed of Dr. Robert Ebel, Michigan State University; Dr. Margaret Fenqueron, State Direct of Career Education in Florida; and Ms. Deede Sharpe, Georgia Department of Education.

In an attempt to make this handbook truly "user oriented," credit is given to those career education practitioners who participated in the user trials prior to publication. Their valuable assistance has greatly enhanced the utility of this handbook. These individuals included: Mrs. Irma Adair, Principal in Arizona; Sister Annene Sieberm.orgen, Principal in Arizona; Mrs. Olivi W. Thomas, Career Education Coordinator in Florida; Mrs. Barbara C. Battle, Project Coordinator in Illinois; Mrs. Maxine Thompson, Career Education Coordinator in Illinois; Dr. Edward Fernandez, Director of Secondary Curriculum in New Mexico; Mrs. Kolene F. Granger, School Counselor in Utah; Dr. M. Larry Petersen, Director of Vocational and Career Education in Utah; Mr. Raymond A. Lambert, Housemaster in Vermont; Mr. Herbert F. Shipman, Director of Career Education in Vermont; Ms. Ginny Zahner, Career Education Teacher in Vermont; Walter Faulkner, Career Education Consultant in Vermont; Donna K. Martin, State Director of Career Education in Illinois; Emil R. Mackey, State Director of Career Education in Arkansas; and Dr. Stanley Leavitt, Supervisor in Utah.

Finally, a special note of appreciation is given to Ms. Marlene Linton, Ms. Debi Roof, and Ms. Kathy Kush who typed the manuscript of this publication.

Robert E. Taylor
Executive Director
The National Center for Research in
Vocational Education

TABLE OF CONTENTS

FOREWORD iii

LIST OF FIGURES AND TABLES vii

LIST OF CHECKLISTS viii

INTRODUCTION 1

ORGANIZATION OF THE HANDBOOK 3

- Objectives 3
- Users 4
- Evaluation Profile 4
- The Thirteen Units 6

PLANNING THE EVALUATION 9

- Unit One: Purpose 9
- Unit Two: Audience 33
- Unit Three: Questions 37
- Unit Four: Process 47
- Unit Five: Staff 53
- Unit Six: Responsibility/Authority 59
- Unit Seven: Uniqueness 65
- Unit Eight: Planning Standards 69

IMPLEMENTING THE EVALUATION 71

- Unit Nine: Instruments 73

COMMUNICATING AND USING EVALUATION RESULTS 75

- Unit Ten: Politics 77
- Unit Eleven: Report Standards 79
- Unit Twelve: Dissemination 85
- Unit Thirteen: Use 89

WRAP-UP 97

SELECTED BIBLIOGRAPHY 99

LIST OF FIGURES AND TABLES

Figures

1	Types of Evaluation	10
2	Partial Sample of a Student-Needs Assessment Instrument	13
3	Partial Sample of a Program-Needs Assessment Instrument	14
4	Audience Based Evaluation Worksheet	20
5	Sample Decision Event Review Form for an Evaluation Instrument	71
6	Chart of Evaluation Activities, Products, and Decisions	52
7	Credibility and Cost of Optional Ways to Staff for Evaluation	54
8	Evaluator—Administrator Responsibilities	61
9	Partial Example of Decision-by-Person Matrix	62
10	Sample News Release	86
11	Type of Decisions	93

Table

1	Criteria for Meta-Evaluation	30

LIST OF CHECKLISTS

Evaluation Profile 5

Purpose Checklist 11

Audience Checklist 34

Questions Checklist 37

- Immediate Student Outcomes 39
- Long-Term Student Outcomes 40
- Intended Program Outcomes 41
- Side Effects 42
- Program Characteristics 43
- Program Standards 44
- Audience Judgments 45

Process Checklist 47

Staffing Checklist 53

- Staff Qualifications Rating Scale 56

Responsibility/Authority Checklist 59

Uniqueness Checklist 65

Checklist of Parts for an Evaluation Plan 69

Checklist of Criteria for Reviewing Evaluation Plans 70

Instrument Checklist 73

Politics Checklist 77

Checklist for Rating the Components of the Evaluation Report 81

Checklist for Rating the Overall Quality of the Evaluation Report 83

Dissemination Checklist 85

Use Checklist 89

INTRODUCTION

Ginny Gonzales is a career education project director in the Central City School District. Her project is a community-based effort to introduce students to careers through on-the-job career exploration. The project is nine months under way in a twelve month contract. The project may be funded for another year if it appears to be successful, but the majority of the members on the local board are skeptical about the project. They are concerned that the project may be too expensive and take too much time away from learning the basics. As a project director, Ginny needs some convincing information about the impact the project is having on the students. Ginny believes in the project. Many of the students have enormous potential and creativity. They are more interested in learning and career planning than they have ever been before. Ginny believes the project is having impact.

But Ginny is also very busy. She simply has not had much time to think about evaluating the project. Her priorities have been elsewhere—getting the project started, solving problems, linking up work experience for the students, and so on. To Ginny, evaluation is something of a frill. Yet at the same time, she is very aware that in three months all her effort could be wasted. Ginny has had some training in evaluation and research but doesn't feel she has the skills to develop a "first rate" evaluation. Ginny also realizes that even the highest quality evaluation might not be believed by the board if it is conducted by staff internal to the project because internal staff might be perceived as having vested interests.

Time is short. Resources are far from plentiful. After juggling the constraints, Ginny decides that it would be beneficial to hire an independent expert to do the evaluation. Yet because of time and dollar limitations, it becomes impossible to locate someone to do the job. So Ginny decides to tackle the evaluation herself. She has in her files two evaluation instruments from other career education programs which ask questions such as "How do you like the program?" from 1 = not at all to 5 = extremely well; "How much do you feel you learned?" from 1 = very little to 5 = very much; etc. Ginny combines some of the items into one instrument and asks a member of the project staff to critique it.

The revised instrument is administered to students in the twelfth month of the project. The results are positive, and Ginny presents them to the school board. But the project is not funded. Although the results were positive, the board did not really believe them. They had too many questions about the program which were not answered through the evaluation.

The evaluation of Ginny's career education project was weak in several respects. For example:

- Ginny did not start thinking about evaluation until the ninth month of a twelve month project. This left little time to plan and use resources wisely.
- The evaluation did not address questions that the audience for the evaluation—the school board—were most interested in finding answers to.
- The evaluation was viewed as protecting self-interests and not being an objective view of the project's impact.

- The evaluation results were subjective—students' opinions about what they learned and how they liked the program—rather than measurement of actual skill, knowledge, or attitudinal attainments.

- No comparative information through devices such as pre-post testing was collected to determine if the program had actually *changed* student's knowledge, skills, or attitudes about careers.

- The potential reality of the boards' negative attitude toward facilitating career exploration for disadvantaged students was not considered in designing the evaluation.

- The project director who reported the results to the board was perceived as biased, so the board mistrusted the results even more.

This scenario illustrates some of the ways inadequate evaluations can cause projects like Ginny's to fail. As an administrator of career education, you may be asked to justify the use of funds for programs under your jurisdiction. To justify your program, you need "credible" evaluative information about the effectiveness of the program. To obtain this information, you may employ the services of a specialist in evaluation research, use someone internal to your project staff, or conduct the evaluation yourself. Whatever the mode, the results of your evaluations, like Ginny's, may be considered inadequate for one or more of the following reasons.

- The evaluation is viewed as being off-base because:
  - the wrong questions were asked
  - trivial outcomes were measured
  - the evaluation failed to measure the real outcomes

- The person who conducts the evaluation is viewed as:
  - having vested interests
  - lacking evaluation expertise
  - lacking familiarity with career education
  - being an "ivory tower" researcher who lacks common sense

- The evaluation results are not believed because:
  - the data are highly subjective
  - no comparative information is collected to determine if the program has truly made a difference
  - the evaluation methods are weak (e.g., faulty research design, biased sampling, invalid instruments, or inappropriate data analysis)

- The evaluation results are not used because:
  - they are communicated poorly or not at all
  - they are not believed
  - they aren't useful
  - they clash with political realities
  - they are wordy and highly technical

Organization of This Handbook

This handbook is divided into thirteen units. Each unit is written to stand alone. The units are organized into a logical sequence from planning and implementing to using evaluations. However, the handbook is designed to allow you to skim, skip, or study units according to your interests, knowledge level, and needs. You are encouraged to use the handbook flexibly.

Objectives

This handbook is designed to show how improved evaluation can help make career education programs like Ginny's fare better in tests of accountability. This handbook focuses on the administrator's role in improving the quality and usefulness of career education evaluations. Specifically, administrators will improve their skills in:

1. defining their responsibilities in evaluation activities
2. selecting and using evaluation services in a cost-effective and mutually satisfactory manner
3. judging the quality of evaluation designs, instruments, and results
4. assuring that the evaluation will provide information which is believable, relevant, and understandable to key audiences
5. communicating the results of the evaluation to different audiences (e.g., school boards, parents, legislators, etc.)
6. using evaluation results for making decisions

Users

This handbook is designed for local and state directors of programs that link education and work. Since these programs vary in size and funding level, administrators' involvement in evaluation of the programs also varies. Some administrators manage programs with differentiated staffing and can plan to use external evaluation services. Other administrators, like Ginny Gonzales, work under severe restrictions. Regardless of the size and funding level of your program, this handbook will help you in *administering* the planning, implementation, and use of evaluation studies.

Evaluation Profile

The handbook is organized around an *Evaluation Profile.* The profile summarizes some critical ingredients for planning, implementing, communicating, and using the results from evaluations of career education programs. It highlights evaluation issues that require your direction, input, or sanction. The profile contains the *major* questions that administrators might ask but is not a complete list. Hopefully, it will trigger additional thoughts and issues for you.

The profile is designed to help you:

- think through your role in the evaluation process
- identify potential weak spots in your evaluation plans
- become familiar with evaluation issues you may not have considered
- gain an overview of the contents of the handbook
- decide which sections of the handbook you should study in depth, read casually, or skim

Instructions for Completing the Evaluation Profile

In the left hand column, rate your *current competence* to fully answer each of the questions concerning the evaluation of a career education program by darkening the appropriate circle. Unit numbers in the right hand column provide the key to the "dictionary" marking of the units throughout the handbook.

Example

CURRENT COMPETENCY	EVALUATION QUESTIONS	UNIT
○ ● ○ ○ ○	1. Purpose. What types of evaluation are needed?	1
○ ○ ○ ● ○	2. Audience. Who should the evaluation serve?	2
None Moderate High 0 1 2 3 4		

EVALUATION PROFILE

CURRENT COMPETENCY	EVALUATION QUESTIONS	UNIT
O O O O O	1. Purpose. What types of evaluation are needed?	1
O O O O O	2. Audience. Who should the evaluation serve?	2
O O O O O	3. Questions. What specific questions should the evaluation answer?	3
O O O O O	4. Process. How will the evaluation be accomplished?	4
O O O O O	5. Staff. What type of evaluation services, if any, should be used?	5
O O O O O	6. Responsibility/Authority. What are the respective roles and responsibilities of program staff and evaluators?	6
O O O O O	7. Uniqueness. What unique features of career education influence its evaluation?	7
O O O O O	8. Planning Standards. What are the characteristics of a "good" evaluation plan?	8
O O O O O	9. Instrument Standards. What are the characteristics of a "good" evaluation instrument?	9
O O O O O	10. Politics. What political factors might affect use of the evaluation results?	10
O O O O O	11. Report Standards. What are the characteristics of a "good" evaluation report?	11
O O O O O	12. Dissemination. What techniques will be used to disseminate the findings?	12
O O O O O	13. Use. How will the evaluation findings be turned into action?	13
None Moderate High 0 1 2 3 4		

The Thirteen Units

The remainder of the handbook is divided into units that are keyed to each item on the profile. The large numbers in the right hand margins identify all the pages of a unit. These units are organized around checklists for assessing in more detail the different aspects of your evaluation plan, instruments, and reports. In each unit the checklist items are elaborated through:

- short explanatory readings
- examples to illustrate key concepts
- practice exercises to help you apply the information to your own setting
- guidelines for improving your evaluation
- suggested readings for further information

Each unit is written to stand alone. You may choose to read only those units which interest you the most or about which you have the least knowledge. The following chart provides a brief description of the contents of each unit, and its location in the handbook.

UNIT	CONTENTS	PAGE
1. Purpose	This unit discusses the need for evaluation and the pros and cons of using different types of evaluation—objectives based, goal free, audience based, cost effective, descriptive, and different combinations of these and other types.	9
2. Audience	This unit stresses the importance of working with people and designing evaluations around specific individuals' information needs. Guidelines for involving different audiences in the evaluation process are presented.	33
3. Questions	This unit provides mini checklists of questions about career education programs and their outcomes that could be answered through evaluation.	37
4. Process	This unit will help you manage the evaluation process through specifying tasks, scheduling time lines, describing products, and identifying critical decision points.	47
5. Staff	This section offers advice on using evaluation services within limited resources.	53

(continued on next page)

UNIT		CONTENTS *(continued)*	PAGE
6.	Responsibility/ Authority	This section will help you decide which evaluation activities require your leadership, which require your support, and which should be delegated to others for credibility or efficiency.	59
7.	Uniqueness	This section outlines some of the unique features and problems of career education that should be considered when designing evaluations.	65
8.	Planning Standards	Advice on reviewing evaluation plans for completeness, technical adequacy and usefulness is offered.	69
9.	Instrument Standards	Advice on reviewing the content, technical features and format of evaluation instruments is offered.	73
10.	Politics	Ideas for dealing with the political factors that affect use of evaluation results are discussed.	77
11.	Report Standards	Advice on reviewing evaluation reports for completeness, accuracy, utility, and feasibility is offered.	79
12.	Dissemination	This section provides guidelines for sharing the results of evaluations with different audiences through popularized reports, executive summaries, news releases, presentations and other media.	85
13.	Use	Advice on using evaluation results to bring about change is offered.	89

PLANNING THE EVALUATION

A good plan is basic to any evaluation process. An evaluation plan will help you think through *who* needs *what* information *when* and in *what format.*

A "good" evaluation plan is one that will

- help you think through the entire evaluation process
- provide a working frame of reference for making decisions, handling crises, and checking that activities are still on target toward the original goals
- be carefully refined, continuously updated, and sometimes drastically changed as you learn from experience and discover new opportunities
- be a means to an end—a "working" document—rather than an end in itself.

1. Purpose. What type of evaluation is needed?

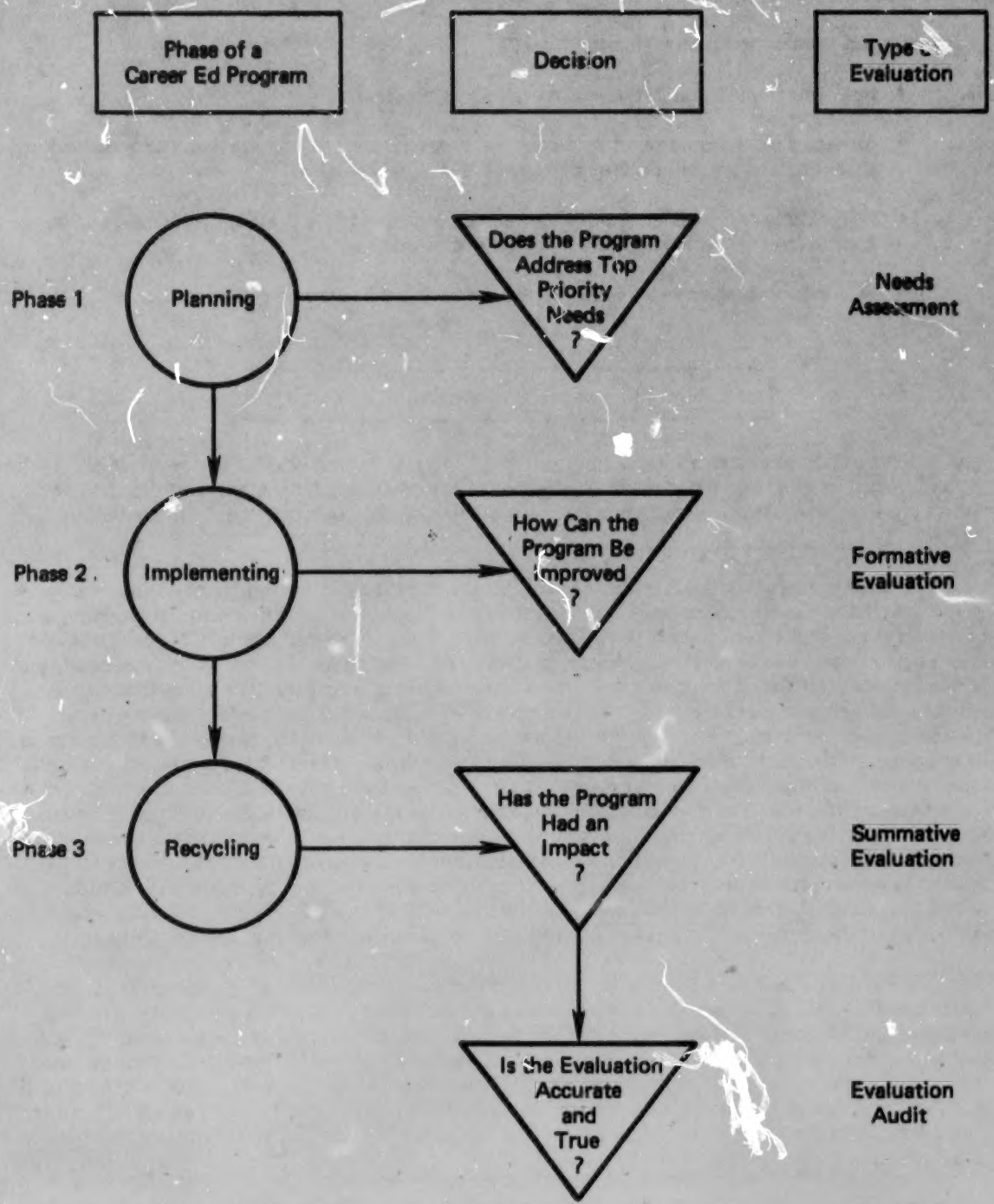
An evaluation can serve a variety of purposes. The purpose of an evaluation depends on (1) the type of decisions that need to be made as a result of the evaluation, (2) the phase of the career education program, and (3) the information needs of those who are expected to use the evaluation results.

There are at least four basic types of evaluation. Each type can help monitor a different phase in the life of a career education program. One type of evaluation is done in the initial planning phase of a program so that the effort can be focused on meeting the important needs. This type of evaluation, often referred to as *needs assessment*, is used to help make planning decisions. A second type of evaluation, often called *formative evaluation,* occurs while a program is being implemented to collect information about how it can be improved. Formative evaluation serves "implementing decisions" (decisions about how well the program is being implemented as planned and what aspects of the program should be modified). A third type of evaluation focuses on the sum worth of a program—its success in achieving objectives, overall effectiveness for the funds expended, and impact on the intended audience. This type of evaluation, referred to as a *summative evaluation,* often occurs near the end of a program but can occur whenever attainments occur. Summative evaluation is used to make "recycling decisions" (decisions about the future of a program or part of a program). A fourth type is an evaluation of the evaluation by an external party to verify that the evaluation is relevant, accurate, and reliable. This type, called an *evaluation audit*, is usually connected with an evaluation of the sum worth of a program. Figure 1 portrays these four types of evaluation.

The Purpose Checklist below outlines these four major types of evaluation and a variety of more specific types. Your evaluation may include one or several of these types. Use the *Purpose Checklist* and the additional information in this unit to think through the major purposes of your evaluation and the types of evaluation that are most appropriate for your situation. More detailed information about the needs of the audiences that the evaluation should serve and about the specific questions that the evaluation should address is provided in units 2 ("Audiences") and 3 ("Questions"). The materials in the sub-section following the *Purpose Checklist* describe each type of evaluation in detail.

Figure 1

Types of Evaluation



✓ PURPOSE CHECKLIST

1

Instructions: Answer each of the following questions for your career education program by checking (✓) the appropriate response in the space provided.

Yes	No		
☐	☐	1.1	Need. Is any type of evaluation actually needed?
☐	☐	1.2	Needs Assessment. Is information needed about the priority *needs and problems* the career education program should address?
☐	☐	1.3	Formative Evaluation. Is information needed to monitor and/or improve the program as it progresses?
☐	☐	1.4	Summative Evaluation. Is information needed about the *sum worth* of the program?
☐	☐	1.4.1	Objectives Based Evaluation. Is information needed about the success of the program in meeting its intended outcomes or objectives?
☐	☐	1.4.2	Goal-free Evaluation. Is information needed about how well the program meets standards of excellence for career education programs?
☐	☐	1.4.3	Audience Based Evaluation. Are the information needs of various audiences to be answered through the evaluation?
☐	☐	1.4.4	Follow-up Evaluation. Is information needed about the long-term impact of the program on participants (e.g., career placement, job satisfaction, job competency, etc.)?
☐	☐	1.4.5	Cost-effectiveness Evaluation. Is information needed about the cost of the program in relationship to the outcomes produced?
☐	☐	1.4.6	Comparative Evaluation. Is information needed about how your program compares with other career education programs on common criteria?
☐	☐	1.4.7	Descriptive Evaluation. Is in-depth descriptive information (case studies, systematic observation, in-depth interviews, etc.) needed about the key features, activities, and outcomes of the program?
☐	☐	1.5	Evaluation Audit. Is information needed to verify the accuracy of the evaluation?

1.1 Need. Is any type of evaluation actually needed?

It is possible that an evaluation is not actually needed. Many evaluations are conducted because somebody thought they were a good idea. A time-consuming and costly evaluation may be conducted and then never used. As a general rule, an evaluation should not be conducted unless some commitment can be generated for using the results to change the program, set priorities, influence decisions, or justify funding.

Even evaluations that are mandated should be carefully thought through and negotiated to provide useful information rather than to comply with requirements. There are many legitimate reasons for conducting evaluations. These range from substantiating claims that a project is doing well to keeping the public informed of the goals and progress of career education. The important point is to determine at the beginning rather than at the end of the evaluation process how the results could be used. If you cannot picture the results being used by one or more specific individuals for at least one specific purpose, don't do the evaluation.

1.2 Needs Assessment. Is there a need for information about the priority needs and problems that the career education program should address?

Needs assessment is a process for identifying gaps between "what is" and "what should be" and for determining priorities among these gaps or "needs." Needs assessment is a useful tool in the planning stages to focus a program in the right direction. The process of conducting a needs assessment will not be covered in depth in this handbook. For more information, refer to *Needs Assessment and Career Education: An Approach for States* (McCaslin and Lave, 1976). An excellent review of needs-assessment models and procedures for general education is *An Analysis of Needs Assessment Techniques for Educational Planning at State, Intermediate, and District Levels* (Witkin, 1975). Many of these techniques can be adapted for career education. Several states have developed needs-assessment instruments. Some exemplary instruments are those developed in Michigan (State Department of Education, 1976), Wisconsin (Gessner, 1976), Florida (Adams, 1977), and Texas (Texas Education Agency, 1975). For abstracts of these and other needs-assessment instruments, see *Career Education Measures: A Compendium of Evaluation Instruments,* another of the five handbooks in this CEM series.

Once you know which needs are top priority in your locality, you will be more able to design programs to meet these needs. Using data based information about needs as a basis for program planning will also allow you to justify your program to sponsors and constituents. A needs assessment can be oriented to student needs, program needs, or both. A needs assessment typically seeks input into the educational process from a variety of audiences, including students, educators, employers, parents, and other community members.

Basis of Needs Assessment

Objectives form the basis of an assessment of student needs and are usually stated as desirable skills, knowledge, and attitudes for students to possess. For example:

"Students will understand the variety and complexity of careers in the world of work."

Purpose of Student-needs Assessment

The purpose of a student-needs assessment is to find out (1) how well students are currently performing on each objective, (2) which objectives teachers, parents, administrators, students, community members, and other relevant persons perceive to be most important for students to perform well on. The bigger the difference between these two dimensions (performance and importance), the greater the need. A partial sample of a student needs assessment instrument drawn from the *Florida Assessment of Needs in Career Education*—FANCE (Adams, 1977) is illustrated in Figure 2.

Figure 2

Partial Sample of Student-Needs Assessment Instrument

Actual Attainment							Desired Priority				
Realistically estimate the percent of students in your district or school who have attained minimal competency in each of the following goals by the time they leave high school.							Rate the relative priority of meeting each goal for your district or school.				
							Lower		Medium		Higher
0-9%	10-24%	25-49%	50-74%	75-89%	90-100%	Work Values	1	2	3	4	5
☐	☐	☐	☐	☐	☐	Students understand how careers contribute to society.	☐	☐	☐	☐	☐
☐	☐	☐	☐	☐	☐	Students recognize the social and economic benefits of working and understand the consequences of not working.	☐	☐	☐	☐	☐
☐	☐	☐	☐	☐	☐	Students view career roles independent of sex stereotypes.	☐	☐	☐	☐	☐
☐	☐	☐	☐	☐	☐	Students view career roles independent of racial stereotypes.	☐	☐	☐	☐	☐

Purpose of Program-needs Assessment

A needs assessment can also focus on program needs. Program needs include the resources, activities, people, services, etc. that are required to deliver career education to students. Some selected areas and a rating format for assessment of program needs for career education, also drawn from FANCE, are listed in Figure 3. A program-needs assessment could be used to determine the necessary steps for implementing a career-education program, weaknesses in the current delivery system, or priority areas for new funding. A needs assessment process similar to that used for student needs can be used to determine program needs. However in the latter process, the respondent is asked to rate the "need for improvement" of career-education resources, community involvement, work-experience opportunities, staff expertise, etc. This scale combines the comparison of current and desired status into one rating scale. In other words, respondents are asked to compare in one step the current status of career education with the desired status and to use information to determine the areas that most need to be improved.

Figure 3

Partial Sample of a Program-Needs Assessment Instrument

		Need for Improvement What is the relative need for expanding or improving each program activity in your district or school? Lower Medium Higher 1 2 3 4 5
	Infusion of Career Education	
1.	Integrate career education into vocational education.	☐ ☐ ☐ ☐ ☐
2.	Integrate career education into general education subjects (e.g., language arts, mathematics, social studies.)	☐ ☐ ☐ ☐ ☐
3.	Provide units on career education (e.g., job hunting skills) within existing courses.	☐ ☐ ☐ ☐ ☐
4.	Provide career education separate from the school curriculum (e.g., career fair sponsored by local industry).	☐ ☐ ☐ ☐ ☐
5.	Coordinate student career education experiences across grades.	☐ ☐ ☐ ☐ ☐
6.	Promote preservice teacher training in career education.	☐ ☐ ☐ ☐ ☐

Size of the Needs Assessment

A needs assessment can be as big or small as required. It can be used nationwide, statewide, district wide, school wide, or within one classroom to help match a program to students' unique skill levels, interests, and backgrounds. A needs assessment should be initiated before a program begins so that the program can focus on high priority areas of need. However, it can also be conducted after a program has begun and then used to refine the specific objectives of the program so they will better meet the needs of the intended population.

1.3 Formative Evaluation. Is information needed to monitor and/or improve the program as it progresses?

Once a program gets under way, there will still be countless problems and ways that it could be improved. Even the best laid plans need to be reshaped and refocused when they are put into practice. There are many evaluation techniques that can be helpful to provide information for improving a program. This type of information should help project administrators to make decisions about what aspects of the program need to be modified.

Evaluation for improvement can be as simple as scheduling periodic meetings with the program staff to discuss their problems and to ask for suggestions for improvement. It can also be more

systematic and elaborate. However, even the most elaborate evaluation for improvement is usually based upon some fairly simple questions:

- Are we still on target towards the program goals?
- What are the strengths of the program? What are the best features? What's working well?
- What are the weaknesses of the program? What are the most problem-ridden areas? What's not working?
- What suggestions, recommendations, and ideas do various participants in the program have for building on the strengths and reducing the problems?
- What related opportunities or activities are occurring that the program should incorporate, take advantage of, or learn from? Is the program up to date with the "state-of-the-art" in career education?

Although these questions appear to be simple and straight-forward, obtaining accurate comprehensive answers to them is often difficult and time consuming. For guidance in conducting evaluations for improvement, see:

*Lawson, Tom E. *Formative Instructional Product Evaluation: Instruments and Strategies.* Englewood Cliffs, N.J. Educational Technology Publications, 1975.

*Sanders, James R. and Cunningham, Donald J. *Techniques and Procedures for Formative Evaluation.* Paper No. 2. Portland, Oregon. Northwest Regional Education Laboratory, 1974.

1.4 Summative Evaluation. Is information about the sum worth of the program needed?

Judging merit or worth of a program is the heart of an evaluation. There are many different ways to assess outcomes, impact, merit, or worth. For example, you may decide to focus the evaluation on the intended outcomes or objectives of a program. Your question might be "How well were the intended outcomes achieved?" However, at some point in the evaluation process you may realize that the objectives do not do a very good job of describing what really happened in the program. The objectives are often out of date; perhaps the program has matured and changed since they were written.

This discovery may bring you to a second evaluation question: "To what extent have the program objectives been implemented as planned?" Sometimes there is an evaluation of activities and entities that never really existed; Worthen (1974) provides the following example: "The concept of team teaching has fared poorly in several evaluations, resulting in a general impression that team teaching is ineffective. Closer inspection shows that many methods labeled as team teaching provided no real opportunities for staff to plan together or work together in direct instruction." It is often valuable to find out which parts of a program have actually been implemented according to the original plans.

Uses of Summative Evaluations

It is usually difficult to picture the impact of a program if only the intended outcomes are evaluated. This is not to say that intended outcomes should be ignored. Many times objectives, as stated in a project proposal or other planning document, reflect a commitment to your sponsors and constituents to work toward certain types of outcomes. However, you can also make a case for evaluating more than your intended outcomes. As a program is implemented, it matures, grows, and changes. Some things work and others don't. Program staff who are learning from failures and successes are modifying the program as it progresses.

Therefore, in addition to evaluating the attainment of *intended* outcomes, the evaluation can also be used to:

* describe key features, activities, and outcomes of the program in depth
* determine the unintended positive outcomes of the program, such as improved attitude toward school, reduced absenteeism, etc.
* determine any unintended negative outcomes of the program, such as declining achievement scores, increased student disruption in non career oriented school subjects
* determine how well the program meets standards of excellence
* determine the impact of the program on desirable short-term student outcomes such as knowledge of careers, knowledge of self in relation to careers, job-seeking skills, etc.
* determine the impact of the program on desirable long-range student outcomes such as job placement, job competence, and job satisfaction
* determine if the cost of the outcomes produced is comparable to the cost of programs with similar outcomes

1.4.1 Objectives Based Evaluation. Is information needed about the success of the program in meeting its intended outcomes or objectives?

Objectives provide an important and solid base for evaluation. Objectives-based evaluation is the most common type of evaluation practiced in education. The various terms used to describe objectives can become somewhat confusing. Goals, intended outcomes, expected outcomes, objectives, behavioral objectives, performance objectives, elements, and measurable objectives are some frequently used terms. Basically, goals are more general statements, and objectives are more specific. They both describe intended or expected outcomes of a program or learning experience. Goals are usually stated too broadly or generally to measure directly how well they have been attained. Therefore, evaluations often rely on more specific objectives that are derived from goals. An objective is said to be stated in "behavioral," "performance," or "measurable" terms when it clearly describes what a person should be able to do after completing a learning experience. A complete behavioral objective can contain four parts (Adams, Lowry, and Suzuki, 1977). The terms describing these parts begin with the first four letters of the alphabet, "ABCD."

A. *Actor(s).* The group of students (or adults) who will perform a desired behavior.

B. *Behavior.* A knowledge, skill, or attitude that the actor can be seen or heard performing.

C. *Condition* (an optional part of behavioral objectives). What the actor has to work with to perform the desired behavior; it can be materials or a setting.

D. *Degree of Success.* A criterion to determine whether an actor has successfully mastered the behavior prescribed by the objective.

Objectives based evaluation depends on five basic steps:

1. Establish and validate* broad goals for the program.

2. Identify and validate specific objectives that are derived from each goal. These objectives may describe knowledge, skills, attitudes, or behaviors.

3. State each objective in measurable terms.

4. Develop or select measures of performance for each objective.

5. Measure performance on each objective. Performance can be measured before and after the program through pre-post testing to determine the amount of change in participants' knowledge, skills, attitudes, or behaviors. Or performance can be measured only at the end of the program to assess how well participants have mastered program objectives.

You and members of your staff should accept responsibility for steps 1 and 2. Step 3 should be a joint activity between program staff and evaluators. The program evaluator should take responsibility for the remaining steps. If you can clearly communicate your intentions for the program, the evaluator should be able to translate your intentions into behavioral objectives. You will, of course, want to review the measurable objectives (and later, the tests) to ensure that the original intentions have not been distorted.

When developing program goals and objectives for career education programs, you should review existing sets of objectives. Some sources of goals and objectives for career education programs are:

**Perspectives on the Problem of Evaluation in Career Education*—"Ten Learner Outcomes" (Hoyt, 1976).

**Developmental Program Goals for the Comprehensive Career Education Model* (The Center for Vocational Education, 1972).

**Career Education: An Introduction* (The Career Education Center, Florida State University, 1975).

---

*Validation is the process of involving program staff, participants, and/or constituents in assessing the extent to which goals or objectives for the program truly reflect the program's contents. Goals and/or objectives are reviewed in terms of their relevance, comprehensiveness, clarity, and feasibility.

Career Development Goals and Performance Indicators (Michigan Department of Education, 1974).

Basic Learner Outcomes for Career Education (Texas Education Agency, 1973). A sample listing of student career education outcomes is also listed on pages 39 and 40 of this handbook.

1.4.2 Goal-free Evaluation. Is information needed about how well the program meets standards of excellence and desirable outcomes for career education?

Basing evaluations totally on performance objectives restricts the focus of the evaluation to intended outcomes. Unintended outcomes, the intrinsic qualities of a program, and the relationships among the objectives—three focal points that are potentially as important as the original objectives—are often overlooked.

Goal-free evaluation was introduced by Scriven (1972). The rationale for goal-free evaluation can be summarized briefly as follows. First, educational goals should not be taken as given; they, like anything else, should be evaluated. Second, goals are generally little more than rhetoric which seldom reveal the real objectives of the program. Third, many important outcomes of a program or side effects do not fall in the category of goals and objectives anyway. For example, a career education program may serve social goals, such as reducing student absenteeism and tardiness or facilitating parental involvement in school activities—desirable outcomes but usually not explicit goals of career education programs. Negative side effects such as declining achievement-test scores or increasing student disruption in non-career oriented courses, might also result from a career-education program. Fourth, there are many intrinsic standards of excellence that virtually all career-education programs should try to meet, such as addressing important needs, limiting expenses, and so on.

Objectives based and goal-free evaluation can supplement one another very well. Most program directors and sponsors need to know how well the program is meeting its goals. But goals also serve as blinders, causing one to miss those important aspects of the program that are not directly related to goals. Goal-free evaluation allows the total program to be evaluated on the basis of all its outcomes, whether intended or not.

1.4.3 Audience Based Evaluation. Are the information needs of various audiences to be answered through the evaluation?

Stenner (1972) proposed a strategy called *Information Based Evaluation for Career Education.* Stenner recommends that the *information needs* of the users of the evaluation supplement program objectives as reference points for designing the evaluation. Information needs of users are questions and concerns about which relevant individuals desire answers.

Potential information users (such as those identified in Unit 2, "Audiences") can be polled to gain representative views of what questions the evaluation should answer. Various types of audiences

can be asked to "fill in the blank" for a statement such as "I would like to know _____ about this career education program." A balanced list of evaluation questions that reflects the information needs of different audiences should be developed. Since program developers and staff generally have a high commitment to the program, their information needs may show them to be somewhat myopic and reluctant to receive negative feedback. Individuals who are more removed from the program may want answers to "hard nose" questions about its impact, and they may be more likely to question potential weaknesses and unintended outcomes.

Uses of an Audience Based Evaluation Worksheet

After a reasonably complete list of information needs has been developed, you may want to involve representatives from the different audiences in selecting the most important questions for the evaluation to answer. A three-step process is suggested. First, audiences can be asked to rate the utility of information as essential, important, marginal, or questionable. Second, selected audiences (project staff, project director, and project sponsor) can rate the practicality (time, cost, method, etc.) of collecting the information as very high, high, moderate, or questionable. Third, both the utility and practicality of the information can be used to rank areas of information from highest to lowest priority.

A sample worksheet for recording information needs, audiences, utility weightings, and practicality weightings is illustrated in Figure 4. The utility weightings can be tabulated across audiences to determine which information is most important to those audiences. Practicality weightings can be used to temper the utility weightings. Some types of information may be very useful but also very expensive and time-consuming to collect (such as longitudinal follow-up studies of graduates.) Both practicality and utility should be considered when selecting the information needs which the evaluation will serve.

Benefits of Audience Involvement

The involvement of audiences in focusing an evaluation has an additional benefit. Research on educational change has found that when individuals are involved in the planning and implementation of an activity, and when they are kept informed of progress and periodically asked for advice, they will tend to be more supportive and to make greater use of the outcomes and products emerging from the activity. Therefore, if relevant audiences are encouraged to express their information needs, they will be more likely to support and use the evaluation results.

1.4.4 Follow-up Evaluation. Is information needed about the long-term impact of the program on participants?

Follow-up studies are designed to evaluate the product of career education programs—the graduate's progress. The primary goal of such education, the preparation of individuals for careers, can best be assessed by examining the career placement, performance, satisfaction, mobility, etc. of graduates. A follow-up study can be used to collect information directly from graduates as well as from employers of graduates.

Purpose of a Follow-up Study

Former students can often provide valuable information about the strengths and weaknesses of a career education program. A student follow-up study can serve a variety of purposes, for example:

Figure 4
Audience Based Evaluation Worksheet

INFORMATION NEEDS	GROUPS							TOTALS		
	Project Staff	Project Director	Funding Sponsor	School Board	Teachers	Community Resource Persons	Parents	Utility	Practicality	Priority Ranking
Description of a typical day in the program										
Students' attitude toward the program										
Program costs compared to similar programs										
Adequacy of facilities										
Students' knowledge of their career opportunities										
Students' knowledge of their aptitudes and interests										
Students' attitude toward work										
Students' placement in relevant jobs										
Graduates' job satisfaction										
Adequacy of the instructional process										
Graduates' job performance										

Instructions:

1. In each cell on the worksheet, enter the average utility rating given to each information need by each group based on the following scale: Utility: 4 = essential 3 = important 2 = marginal 1 = questionable.
2. In the first TOTALS column, enter the average utility rating across groups.
3. In the second TOTALS column, rate the practicality of collecting the information based on the following scale: Practicality: 4 = very high 3 = high 2 = moderate 1 = low.
4. In the last column rank the overall priority of the information needs from greatest to least.

1. To determine the career patterns of former participants in various career-education programs. Information about the path of advancement and pattern of salary increase for former students can be tracked at intervals of one, three, and five years. Graduates' involvement in continuing or recurrent education can also be assessed.

2. To determine the mobility of program graduates. Movement from job to job, from one locality to another, or even from department to department within a firm can be assessed by a follow-up study.

3. To determine the adequacy of the career-education program in preparing students for the transition from school to work. Graduates' successes and difficulties in job hunting, job interviewing, job applications, work relationships, work habits and attitudes, job problem-solving, etc. can be assessed through a follow-up study.

4. To determine the appropriateness of students' career choice, job satisfaction, personal and social fulfillment, and awareness of means and implications for changing career choice, job situation, and life style can be assessed. Additionally, graduates' future plans and ability to change and advance in their career can be determined.

Method for a Follow-up Study

Some step-by-step guidelines for conducting follow-up studies are provided in chapters 4 and 5, "The Follow-up as an Evaluative Tool" of *Evaluating Occupational Education and Training Programs* (Wentling and Lawson, 1976). The steps covered include:

1. Development of the follow-up instrument
   - making the instrument visually appealing and easy to read
   - developing items of different types (yes-no response, multiple choice, rating items, open-ended items)
   - writing directions
   - devising the format for the instrument
   - validating the instrument

2. Administration of the follow-up study
   - determining groups to follow up
   - choosing the method (personal interview, telephone interview, or mail survey)
   - locating former students
   - orienting respondents before they receive the survey

- distributing instruments
- following up non-respondents

3. Processing the follow-up results
   - tabulating responses
   - summarizing responses
4. Utilizing results
   - altering objectives, content, and activities of the career education program
   - determining the long-range impact of the career education program

Employers, too, can provide valuable information about former students' job performance, work habits and attitudes, and work relationships. A simple instrument like the following one can provide employers' perceptions about the job traits of former students.

	Low		Average		High
Dependability. promptness, reliability in attendance	1	2	3	4	5
Responsibility. willingness to accept and perform work	1	2	3	4	5
Initiative. ability to plan and direct own work	1	2	3	4	5

Employers can also rate the specific career competencies of graduates.

1.4.5 Cost-effectiveness Evaluation. Is information needed about the cost of a program in terms of the outcomes produced?

The importance of determining the cost-effectiveness of a program is explained in the following quotation:

> During the past few years, an increasing number of school bonds and levies have been disapproved. The once adequate plea of "we need more money so that we can provide children with a high quality education" seems no longer to satisfy the American voter. School districts are being forced to indicate more clearly how their present funds are being spent, what the results are, and how additional funds will be spent if they are approved by local citizens. Additionally, schools are faced with escalating costs due to inflationary trends. They, too, must pay higher costs

for supplies, equipment, utilities, and personnel. These and other trends are forcing school administrators to examine their budgets more closely and to identify areas where cost-saving practices can be put into effect (McCaslin, 1977).

The outcomes of cost-effectiveness analysis should be to operate career education programs that produce the best possible results for the least possible expense. A comprehensive evaluation of a program's effectiveness as compared to its costs can be a complicated undertaking that requires specialized expertise. Additionally, a cost-effectiveness analysis can lead to an overemphasis on economic efficiency. Many of the goals and objectives of a career education are socially desirable—will lead to a better quality of life and work for students—but are not necessarily economically efficient. This section will not delve into the highly technical aspects of cost effectiveness analysis. Rather, highlights of several key topics related to costs and benefits are presented.

Types of Costs

When collecting information for a cost-effectiveness evaluation of a program, you should collect different types or levels of cost information. These should include:

- Total program cost (by year)
- Per pupil costs (by year)
- Initial start-up costs (costs for materials, getting the program established, developing materials, establishing relationships, etc.)
- Program operation costs (costs after development has been completed and the program is in operation)
- Estimated cost for another school district, etc. to replicate the program.
- Costs (by year) for major elements of the program, such as:
  - Instruction
  - Administration
  - Facilities, equipment, and supplies
  - Indirect costs or overhead
  - Other (travel, consultants, etc.)

Cost-Saving Practices

It is a good idea to maintain records of all the cost-saving practices used during the development and operation of the program, for example:

- Using resource contributions from the community (money, time, facilities, equipment, etc.)

- Building on the work of another program or project which saved development time
- Using volunteers
- Maintaining cooperative efforts with other schools or community organizations in which costs are shared
- Using practices that conserve materials, supplies, duplicating expenses, etc.
- Using practices that reduce administrative costs
- Using practices that conserve energy

The amount of money saved by using these practices should also be estimated and recorded. Cost saving information may be very persuasive evaluation data when combined with information about program outcomes.

Cost Comparison

The cost of your program should be compared to similar career-education programs in other schools in the district. Since cost comparison can be deceptive especially when done on a cross-district basis, it is important to ensure that the same program elements are being compared when costs are determined. Therefore, it is essential to compare programs on the basis of the different types and levels of costs described above (e.g., per pupil cost, instructional costs, etc.) rather than to compare only total program costs.

Zero-Based Budgeting

Zero-based budgeting is a management tool to help put money where the priorities are. Industry uses the technique to reassess operations annually from the ground up, with every dollar spent justified in terms of current organizational goals. Zero-based budgeting should be used during the budgeting process:

- to reassess priorities
- to eliminate duplication
- to determine low levels of performance

Chuang (1977) outlines twelve steps for doing zero-based budgeting:

1. Define educational needs
2. Formulate goals and objectives, and rank them in order of priority or importance
3. Define the method for assessing each objective
4. Identify overall constraints and requirements

5. Establish criteria for selecting among alternative programs

6. Develop decision packages (documents that describe alternative ways to achieve objectives) in such a manner that they can be ranked and evaluated against all other activities competing for limited resources

7. Define the cost of alternative packages

8. Define the anticipated benefits for each package

9. Rank the decision packages and select the most desirable one

10. Prepare an implementation plan

11. Manage the allocation of resources to achieve objectives

12. Assess results

1.4.6 Comparative Evaluation. Is information needed about how your program compares with other career-education programs on common criteria?

Single program, noncomparative evaluations are the most common types of evaluations in education today, because the primary basis for judging success lies not in comparing the program with any other but in determining (1) how well the program does what it purports to do, (2) how well the program meets external standards, and (3) how well the program changes students' performance, skills, or attitudes. Comparative evaluations, on the other hand, are those in which two or more programs or methods are compared with one another on common criteria, and these evaluations can provide much valuable information.

Types of Comparative Evaluations

Among the several types of comparative evaluation are these:

- comparing the same program in different settings or with different types of learners (for example: a junior high career-awareness program is tried in an urban school and a suburban school)

- comparing a program with a control group's program on the same outcome (for example: In the same school one senior class studies a unit on job hunting skills while another senior class studies a unit on entrepreneurship. Both groups of students are evaluated in terms of knowledge of procedures for applying for a job, job interview skills, and ability to prepare a resume.)

- comparing two or more programs that aim for the same outcome but use different methods (for example: Three programs are trying to increase students' knowledge of job categories,

major duties, and supply and demand. One program is using short-term community-based work experiences, one program is using a self-study course in the school library, and one program is using classroom instruction with community resource people).

- comparing the strengths and weaknesses of various programs according to the same standards (for example, all the high school career-education programs in Florida are compared as to the extent to which they are meeting the ten learner outcomes outlined by the Office of Career Education)

A Sample Comparative Evaluation

Comparative evaluations tend to be more useful when they compare specific characteristics and outcomes of different programs than when they compare the relative strengths and weaknesses of total programs. For example, consider that several junior high career-awareness programs are being compared in terms of the following characteristics and outcomes:

Cost	Characteristics
Instructional materials	
Instructional process	
Community involvement	
Number of students served	
Length of program	
Setting	
Target population	
Knowledge of job categories	Outcomes
Knowledge of worker qualifications for specific jobs	
Knowledge of major duties for specific jobs	
Knowledge of supply and demand for different occupations	
Knowledge of job characteristics (hours, pay, etc.)	
Attitude toward learning	
Desire to work	
Ability to locate and use sources of career information	

A comparative evaluation of the two or more programs might reveal the following. Program A is less expensive, has more community involvement, uses an open, unstructured instructional process, and involves fewer students (primarily disadvantaged minorities). It has helped students more in attitude toward learning and in desire to work. The weakest outcomes of the program were ability to locate and use career information, knowledge of supply and demand, and knowledge of worker qualifications.

Program B on the other hand, is more expensive, serves more students (primarily suburban whites), has structured lesson plans with corresponding instructional materials for students, and has less community involvement. It has improved students' ability to locate and use sources of career information and their knowledge of supply and demand, job categories, worker qualifications, and major duties. It has had no measurable impact on attitudes toward learning or on desire to work.

In comparing these two programs, one finds that Program A appears to produce primarily attitudinal changes in a few students with limited resources through various community experiences. Program B appears to produce increased knowledge of careers and of procedures for obtaining career information; the cost is greater, but so is the number of students.

Strengths of Comparative Evaluation

Comparative evaluations have the distinct advantage of offering greater scientific validity to the evaluation process. Comparative evaluations can increase both the internal validity (or accuracy) and the external validity (or "generalizability") of evaluation results. For an outline of 16 experimental and quasi-experimental designs that can be used for comparative evaluations, see Campbell and Stanley (1966).

Limitations of Comparative Evaluation

The primary limitations of comparative evaluations are resources and feasibility. Comparative evaluations are typically more expensive and time consuming to conduct. Additionally, testing conditions required for some types of comparative evaluations—such as random selection, random assignment, and control groups—are often difficult to arrange in school settings.

1.4.7 Descriptive Evaluations. Is in-depth descriptive information needed about the key features, activities, and outcomes of the program?

A descriptive evaluation provides in-depth information about how a program has evolved, what day-to-day activities have occurred, and what the experience has been like for selected program participants and staff. A descriptive evaluation makes use of tools, such as systematic observation, in-depth interviews, case studies and records (e.g., diaries, critical incident records, school records, newspaper accounts, daily logs). Two Career Education Measurement Handbooks, *Using Systematic Observation Techniques in Evaluating Career Education* (Kester, 1977) and *Assessing Experiential Learning in Career Education* (Malak, ed. 1977) (other handbooks in the current CEM series) provide detailed information about how to evaluate programs using descriptive techniques such as these.

Kinds of Descriptive Evaluation

A descriptive evaluation often culminates in an evaluation report, written in a narrative "storybook" style, that describes in detail the experiences of a small sample of program participants. Interesting anecdotes and success stories about the experiences of these participants are shared. Such a report might also present the program from the viewpoint of several of the program staff and community resource persons. A description of program activities might take the reader through a day's experience as a student in the program. For an excellent example of a descriptive evaluation report, see *An Evaluation of TCITY, the Twin City Institute for Talented Youth* (1971) by Robert Stake and Craig Gjerde.

Another type of descriptive evaluation is the technique called "responsive evaluation." Responsive evaluation focuses on activities and describes the experiences and outcomes for a small random sample of the individuals involved in a program. A responsive evaluation report would give the reader the vicarious experience of being in the program. In *Evaluating the Arts in Education: A Responsive Approach* (1976), Robert Stake, who developed responsive evaluation, outlines reasons for choosing the technique and demonstrates how it can be used.

A third descriptive technique—the evaluation techniques used by art critics, wine connoisseurs, gourmet cooks, and other connoisseurs and critics of the fine arts—has been applied to education by Eliot Eisner. His paper, "The Perceptive Eye: Toward Reformation of Educational Evaluation" (1975), presents a strong case for an artistic model of evaluation that should be used in conjunction with a more scientific model.

Because unsystematic descriptive evaluations are often more subjective and less scientifically rigorous than the more traditional types of evaluation, they should usually be used in combination with a scientifically based evaluation. However, descriptive evaluations do tend to be more interesting than statistical evaluations; they often communicate the essence and life of a program more compellingly, especially to those not sophisticated in research and statistics. For school boards, legislators, and parents, descriptive reports may be especially useful in communicating the activities, strengths, weaknesses, and outcomes of a career-education program. Even for audiences with more expertise in evaluation methods, descriptive evaluations can be refreshing. Consult the Career Education Measurement Handbook on "Using Systematic Observation Techniques in Evaluating Career Education" for more specific ideas.

1.5 Evaluation Audit. Is information needed to verify the accuracy of an evaluation?

The word "audit" is connected in most of our minds with the audit of an income tax return or the financial auditing associated with accountants, but evaluation auditing does not focus upon financial activities.

Definition of an Evaluation Audit

An evaluation audit is an evaluation of an evaluation. Cook (1974) describes an evaluation audit as an external review procedure performed by qualified outside technical personnel who are not directly involved in the actual operation or evaluation of the program. It is designed to (1) assess the appropriateness of the evaluation procedures employed, and (2) verify the results of the evaluation.

Audit Functions

These two functions of an evaluation auditor could be described in greater detail as follows:

1. Check and report on the strengths and weaknesses of the evaluation plan, including
   - completeness of the plan
   - validity and reliability of the data-collection instruments for the career-education program being evaluated
   - internal and external validity of the data collection procedures and conditions
   - technical quality and appropriateness of the data storage and analysis techniques
   - cost-effectiveness of the evaluation plan

2. Verify the accuracy of the evaluation findings and report. The primary requirements for an effective evaluation auditor is *independence*. Presumably, an external party can determine the "truth" without being subjected to influences of various kinds. *Credibility* of educational results from the program is enhanced if an outside investigator with *objectivity* is involved in examining program operations and results.

Audit Process

The auditor should develop a contract and a plan for auditing. The contract states rates of pay, schedules for visitation, dates of report submission, and other specified items. The audit plan describes how the auditor plans to carry out the audit. It identifies what objectives will be examined, what instruments examined, what data analyzed, and so on. The auditor typically has the responsibility of preparing three major audit reports:

Pre-audit critique—a review of the program evaluation plan to determine if it can be audited and to suggest changes in objectives, instruments, data collection procedures, and so on.

Interim audit report—an audit of the mid-year evaluation report of the program.

Final audit report—an analysis of a sample of the program evaluation data and an audit of the final evaluation report of the program.

A kit of workshop materials to train educational auditors has been developed (Klein, 1971) and it describes the audit process in more detail.

Audit Criteria

Many criteria have been suggested for the evaluation of evaluations, sometimes called "meta-evaluation" (Scriven, 1969). Many of these are derived from accepted criteria for research, but research criteria (e.g., technically sound information) comprise only part of the standards that

evaluations should meet. Evaluations must also produce findings that are useful to particular audiences. Additionally, the findings must be worth more to the audiences than the cost of obtaining the information (i.e., the evaluations must be *cost-effective*). A variety of specific criteria to use in evaluating an evaluation plan are described in unit 9 of this handbook. Stufflebeam (1974) suggests the 11 specific criteria for "meta-evaluations" listed below.

Table 1

Criteria for Meta–Evaluations

Criteria for Technical Adequacy

1. Internal validity – whether the findings are true
2. External validity - whether the information is "generalizable" (i.e., the range of persons and conditions to which the findings can be applied)
3. Reliability – whether the data are accurate
4. Objectivity – whether the data are likely to be interpreted similarly by different competent judges

Criteria for Utility

5. Relevance – whether the findings relate to the purposes of the program
6. Importance – whether the evaluation covers the most essential feature of the program
7. Scope – whether the evaluation addresses all of the important questions
8. Credibility – whether the audience trusts the evaluators and supposes them to be free of bias in conducting the evaluation
9. Timeliness – whether the evaluation findings are available in time to be used in making decisions
10. Pervasiveness – whether the findings are disseminated to all intended audiences

Criterion for Cost-Effectiveness

11. Cost-effectiveness – whether the evaluation costs are kept as low as possible without sacrificing quality

Summary

There are four basic types of evaluation: needs assessment, formative evaluation, summative evaluation, and evaluation auditing. A needs assessment can examine student needs, program needs, or both. Formative evaluation is used to monitor a program's progress toward its goals and to provide periodic feedback for improving the program. Summative evaluation—which may take the form of objectives based, goal-free, audience based, follow-up, cost-effective, comparative, or descriptive—gauges the total worth of a program. Most evaluation designs will use a combination of several types of evaluation. For example, the evaluation may be primarily objectives based with several questions about improving the program, several goal-free questions, and several descriptive questions. Evaluation auditing is an evaluation of an evaluation.

Although it is helpful to broaden horizons about the variety of ways to evaluate a program, it would be virtually impossible to employ them all at one time. You will have to decide what is most important and practical to evaluate about your program. Determining the purpose of the evaluation is a critical step in the evaluation process.

2. Audience. Who should the evaluation serve?

Evaluations are conducted to provide useful information for influencing decisions. Since people make decisions, evaluations will be more useful if they are designed with specific people in mind. There are usually three types of audiences for an evaluation study:

1. Decision makers and opinion leaders who will use the evaluation results to influence decisions about the future of the program

2. Program staff and participants who are directly affected by the evaluation

3. The general public who would be interested in hearing about results but are not directly involved in the program

The following checklist enumerates various audiences in these three categories who could potentially be served by your evaluation. Use the checklist to help decide which audiences should be involved.

√ AUDIENCE CHECKLIST

Instructions: In the left-hand column, check whether the evaluation should serve each of the following audiences. In the right-hand column, place the audiences checked "yes" in rank order from greater to lesser importance. Use "5" as the highest rank.

2.1 Decision Makers and Opinion Leaders. Have the sanction and support of relevant decision makers and opinion leaders for the evaluation been secured? For example:

Yes	No			Rank of Importance
☐	☐	2.1.1	Local school boards?	_____
☐	☐	2.1.2	Local advisory committees?	_____
☐	☐	2.1.3	Community leaders?	_____
☐	☐	2.1.4	State boards of education?	_____
☐	☐	2.1.5	Federal funding sponsors?	_____
☐	☐	2.1.6	State advisory councils for career education?	_____
☐	☐	2.1.7	Legislators?	_____
☐	☐	2.1.8	_____	_____
☐	☐	2.1.9	_____	_____

2.2 Program Staff and Participants. Are program staff and participants involved in planning the evaluation? For example:

☐	☐	2.2.1	Program staff (teachers, coordinators, administrators, etc.)?	_____
☐	☐	2.2.2	Participants, usually students?	_____
☐	☐	2.2.3	Others involved in implementing the program (volunteers from business, industry, labor, the professions, or government)?	_____
☐	☐	2.2.4	_____	_____
☐	☐	2.2.5	_____	_____

2.3 General Public. Will the public be kept informed of the goals and results of the evaluation? For example:

☐	☐	2.3.1	Parents?	_____
☐	☐	2.3.2	Other concerned citizens in the local community?	_____
☐	☐	2.3.3	Professional colleagues in career education and evaluation?	_____
☐	☐	2.3.4	_____	_____
☐	☐	2.3.5	_____	_____

2.1 Decision Makers and Opinion Leaders. Have the sanction and support of the relevant decision makers and opinion leaders been secured?

The first group on the audience checklist includes decision makers with positions of formal authority as well as those persons strategically located at lower levels. Members of this group include local school boards, advisory committees, state boards of education, state advisory committees for career education, community leaders, administrators, federal funding sponsors, and legislators at the local, state, or federal levels. This group usually represents the highest priority audience, especially if the focus of the evaluation is on the sum worth of the program.

A study of twenty federal health evaluations was conducted in order to identify factors that increase the use of evaluation results (Patton and others, 1973). The study revealed that the single most important factor was the "personal factor." The personal factor is made up of "leadership, interest, enthusiasm, determination, commitment, aggressiveness, and caring about the evaluation (or program)." In other words, when decision makers and other relevant audiences were involved in thinking through and designing the study and were interested in and committed to the study, evaluations had an impact. When these personal factors were absent, there was a marked decrease in impact. Individuals who care about seeing evaluation results utilized should take seriously their responsibility for identifying relevant decision makers. This means finding a few decision makers and other strategically located persons who have a genuine interest in evaluation information and in the program, who know what questions they want answered, and who know how to use the evaluation information once findings are available. Evaluation should be conducted with these specific people in mind. This is the key to success.

2.2 Program Staff and Participants. Are program staff and participants involved in planning the evaluation?

The second group of users of the evaluation results include program staff and participants.

1. those who are accountable for implementing the program, such as administrators, teachers, counselors, other learning facilitators, coordinators, etc.
2. those who help implement the program—such as resource persons from business, labor, industry, the professions, and government—but are not directly accountable
3. participants in the program

Program staff are frequently asked to use the results of the evaluation to make changes and improvements in the program. Program staff are also likely to be the most threatened by the evaluation. During the initial planning phase and throughout the evaluation, staff and participants should definitely be involved in:

- reviewing the evaluation plan to insure its congruence to actual program activities
- suggesting additional important outcomes that the evaluation should assess

- interacting with the evaluator to voice concerns, constraints, and limitations that should be acknowledged in the evaluation
- reviewing evaluation instruments for their fairness, comprehensiveness, and sensitivity in measuring important aspects of the program
- reviewing drafts of evaluation reports

These people turn the key. If these individuals are involved in designing, critiquing, and implementing the evaluation, they will be more likely to accept, believe in, and use the results of the evaluation to improve programs

2.3 General Public. Will the general public be kept informed of the intents and results of the evaluation?

The third group of users of the evaluation includes parents, concerned citizens, professional colleagues in career education and evaluation, and others who are interested but not directly involved in the program. The evaluation results may serve several purposes with this group, including:

- keeping the public informed about the goals and progress of career education
- keeping colleagues informed about the progress, strength, and weakness of your program

This group usually will not provide much input into the content and method of the evaluation; however, their opinions about the program may influence their future support of and involvement in career education and thus indirectly influence the future of this particular program. The lock is open.

Summary

There are many potential audiences for an evaluation. The evaluation will benefit if you identify these audiences and make decisions about which of them are most important to involve in designing the evaluation. Knowing who the evaluation should serve will help you decide what kind of information to ask about the program.

3. Questions. What specific questions should the evaluation answer?

There are many potential questions that could be answered through an evaluation of a career education program. In fact, there are more questions than could possibly be addressed through any single evaluation. It therefore becomes essential to decide which evaluation questions about your particular program are most important and most practical to answer. The checklist below divides potential questions into seven major categories. Examples of specific questions for each category are listed in the mini-checklists that follow.

√ QUESTION CHECKLIST

Instructions: Decide which types of questions your evaluation will answer by assigning a percent to each of the following categories of questions. The percents should total 100 percent and should reflect the relative importance of the categories. If you think that any of the question categories are not appropriate, assign them 0 percent.

____% 3.1 Immediate Student Outcomes. Questions about changes in students' knowledge, skills, attitudes, or behaviors resulting from a career education experience (e.g., increased knowledge about careers, improved job-seeking skills, improved attitude toward work, etc.)

____% 3.2 Long-Term Student Outcomes. Questions about the impact of career education on students' career development after they leave school (e.g., job placement, satisfaction, retention, advancement, etc.)

____% 3.3 Intended Program Outcomes. Questions about changes the program is designed to bring about that are broader than individual student outcomes (e.g., increased community involvement in the school, increased student involvement in community-based work experiences, etc.)

____% 3.4 Side Effects. Questions about unintended or "spin-off" effects that the program may have on the school, students, teachers, parents, or the community (e.g., decreased local youth unemployment, decreased absenteeism, increased teachers' job satisfaction, etc.)

____% 3.5 Program Characteristics. Questions about program resources, processes, and participants (e.g., number and type of students involved, cost, instructional process, etc.)

____% 3.6 Program Standards. Questions about how well the program meets standards (e.g., reasonable cost, relevance to needs, current content, absence of stereotyping by sex role, etc.)

____% 3.7 Audience Judgments. Questions about the judgments of various audiences on the program (e.g., students, teachers, parents, employers, etc.)

____% 3.8 Other. _____

_____

100 % Total

Examples of evaluation questions for each of these seven categories are provided in the following seven mini-checklists. These questions are meant to stimulate your thinking about the many possible questions that could be answered through an evaluation. Space is provided on each list for you to add additional questions.

MINI-CHECKLISTS OF EVALUATION QUESTIONS

Instructions: Rate the importance and feasibility of answering each question from higher to lower where 5 = higher, 4 = moderately high, 3 = moderate, 2 = moderately low, 1 = lower.

Enter your rating in the spaces provided on either side of the questions in the following checklists. An example of the rating is provided below:

EXAMPLE

Importance		Feasibility
4	Do students in the program have improved knowledge of careers?	4
5	Do graduates of the program have improved career satisfaction?	2
5	What is the cost of the program per pupil?	5

Interpretation:

Those questions which are rated higher in importance (4 or 5) and whose feasibility of being answered are at least moderate (3 or higher) are the most appropriate to address in the evaluation of your program.

3.1 Immediate Student Outcomes. Should the evaluation answer questions about changes in students' knowledge, skills, attitudes, or behaviors resulting from a career-education experience?

3

Importance*	Do students in the program have improved/ increased . . .	Feasibility*
____	career/job knowledge?	____
____	career decisions?	____
____	decision-making skills?	____
____	job hunting skills?	____
____	attitude toward learning?	____
____	desire to work?	____
____	self-confidence/maturity?	____
____	interpersonal skills?	____
____	self-understanding in relation to careers?	____
____	specific occupational skills?	____
____	competence in basic academic skills?	____
____	work habits?	____
____	awareness of opportunities for continuing their education?	____
____	productivity in use of leisure time?	____
____	awareness of means to change career options?	____

*5 = higher, 4 = moderately high, 3 = moderate, 2 = moderately low, 1 = lower.

3.2 Long-Term Student Outcomes.
Should the evaluation answer questions about the impact of career education on students after they leave school?

Do graduates of the program have improved/increased . . .

Importance*		Feasibility*
____	career identity?	____
____	career placement?	____
____	career satisfaction?	____
____	job performance?	____
____	job retention?	____
____	career mobility and advancement?	____
____	salary levels?	____
____	placement in career-related educational programs?	____
____	self-identity?	____
____	self and social fulfillment?	____
____	involvement in continuing or recurrent education?	____
____	personal responsibility to employer?	____

*5 = higher, 4 = moderately high, 3 = moderate, 2 = moderately low, 1 = lower

3.3 Intended Program Outcomes. Should the evaluation answer questions about changes the program intends to bring about that are broader than individual student outcomes?

Has the program increased/improved . . .

Importance*		Feasibility*
____	collaborative relationships with the employment community?	____
____	community awareness of career education?	____
____	parental involvement in career education?	
____	infusion of career-education concepts into academic subjects?	____
____	unpaid "career-exploration" work experiences for students?	____
____	instructional materials and supplies for career-education activities?	____
____	educational personnel's competencies for carrying out their roles in career education?	____
____	plans for coordinating and implementing comprehensive career education programs?	____
____	career guidance, counseling, placement, and/or follow-up services?	____

5 = higher, 4 = moderately high, 3 = moderate, 2 = moderately low, 1 = lower.

3.4 Side Effects. Should the evaluation answer questions about unintended or "spin off" effects?

Importance*	Has the program . . .	Feasibility*
____	increased/reduced absenteeism, tardiness, or truancy?	____
____	raised/declined achievement test scores?	____
____	improved/lowered performance in non-career oriented school subjects?	____
____	increased/decreased vandalism, disruption, discipline problems, or alcohol/drug abuse?	____
____	increased/decreased parental involvement in the school activities (PTA, etc.)?	____
____	increased/decreased community support of the school through bond issues?	____
____	increased/decreased local youth employment?	____

*5 = higher, 4 = moderately high, 3 = moderate, 2 = moderately low, 1 = lower.

3.5 Program Characteristics. Should the evaluation answer questions about program resources, processes, and participants?

What are the program's . . .

Importance*		Feasibility*
____	purposes?	____
____	costs (total and per pupil)?	____
____	number and type of students served?	____
____	type and level of community involvement?	____
____	curriculum materials?	____
____	instructional processes?	____
____	staffing requirements?	____
____	time requirements?	____
____	in-service requirements?	____
____	provisions for populations with special needs (e.g., handicapped, bilingual, disadvantaged, minorities, etc.)?	____
____	provisions to promote sex fairness?	____

*5 = higher, 4 = moderately high, 3 = moderate, 2 = moderately low, 1 = lower.

3.6 Program Standards. Should the evaluation answer questions about how well the program meets standards for high quality career-education programs?

Does the career-education program . . .

Importance*		Feasibility*
____	have accurate and current content?	____
____	focus on relevant topics?	____
____	have a reasonable cost?	____
____	avoid stereotyping by sex role, race, age, or handicaps?	____
____	have community acceptance?	____
____	have flexibility?	____
____	use resources (time, people, dollars) efficiently?	____
____	have comprehensiveness/variety/ range?	____
____	have provisions for continuity and follow-through?	____
____	appear planned/coordinated/systematic?	____
____	appear balanced?	____
____	appear forward-thinking/experimental/ creative?	____
____	have evidence of success/effectiveness?	____

*5 = higher, 4 = moderately high, 3 = moderate, 2 = moderately low, 1 = lower

3.7 Audience Judgments. Should the evaluation collect the judgments of various audiences involved in the program?

Do students, teachers, parents, employers and other relevant audiences for the career-education program . . .

Importance*		Feasibility*
____	have a positive attitude toward the program?	____
____	express enthusiasm for the program?	____
____	perceive that the program has met their expectations?	____
	perceive the program as:	
____	useful?	____
____	relevant?	____
____	high quality?	____
____	successful?	____
____	timely?	____
____	efficient?	____

*5 = higher, 4 = moderately high, 3 = moderate, 2 = moderately low, 1 = lower

4. Process. How will the evaluation be accomplished?

To accomplish an evaluation, you need information about:

- Activities and tasks for conducting the evaluation
- Products the evaluation will produce
- Time lines for completing tasks
- Decision events in the evaluation process

If the evaluation process is carefully planned in advance, the evaluation has a better chance of providing accurate and useful information. The process checklist presents four important factors to consider in planning your evaluation process.

✓ PROCESS CHECKLIST

Instructions: Check (✓) the appropriate response to each question.

Yes	No		
☐	☐	4.1	Activities. Have the activities for accomplishing the evaluation been thought through and written down?
☐	☐	4.2	Products. Have the major products (e.g., instruments, reports, etc.) to be produced through the evaluation been identified and described?
☐	☐	4.3	Time Lines. Have the various evaluation activities and products been carefully scheduled over the available time?
☐	☐	4.4	Decision Events. Have review points been built into the evaluation process for making critical decisions?

4.1 Activities. Have the activities for accomplishing the evaluation been thought through and written down?

An evaluation has a beginning, a middle, and an end. In the beginning, the evaluation is planned and given focus. Important questions —"Why are we doing this? Who should be involved? What do we really want to find out? How much money can we spend? How can we get this information? How might findings be used?"—are asked and answered. In the middle, the evaluation plan is implemented. Instruments are developed. Information about the program is

collected, analyzed, and interpreted. In the end, the evaluation results are communicated and used. The findings are summarized into technical and popularized reports and disseminated. The findings may then be used to make decisions, improve the program, or provide evidence for accountability. Below, some activities and tasks typically performed in an evaluation are listed.

EXAMPLE EVALUATION ACTIVITIES

1. Plan and organize the evaluation.
   - Determine what information should be collected, who will use it, and how it will be used.
   - Budget and assign staff for evaluation.
   - Prepare for evaluation by developing a scope of work, a schedule, and role responsibilities.
2. Implement the evaluation.
   - Develop or select instruments for collecting the information.
   - Collect the information.
   - Analyze and interpret the information.
3. Communicate and use the evaluation results.
   - Build acceptance of the evaluation results.
   - Prepare evaluation reports.
   - Disseminate evaluation results.
   - Use evaluation results.

4.2 Products. Have the major products to be produced through the evaluation been identified and described?

Three types of products are generally produced in evaluation studies:

1. An evaluation plan which outlines in some detail the components of the evaluation: purpose, objectives, audience, questions to be addressed, procedures for accomplishing the objectives, activities and tasks, decision points, time lines, budget, staffing, role responsibilities, instruments, data collection procedures, data analysis procedures, reporting procedures, and dissemination procedures.
2. Instruments for gathering information, for example: multiple-choice knowledge tests, opinionnaires and rating scales, interview questions, schedules for systematic observation, and performance tests.

3. Reports which present the findings, including technical reports and executive summaries for sponsors and decision makers; popularized reports and news releases for participants, colleagues, and the general public; and "in-house" improvement-oriented reports for project staff.

4.3 Time Lines. Have evaluation activities and products been carefully scheduled over the available time?

Time lines are among the most critical elements in the evaluation process. The following considerations are generally important ones for establishing the occasions when evaluation information is collected:

* Baseline information. Time should be allotted for collecting information before participants are exposed to the program so that changes in knowledge, skills, or attitudes can be evaluated.
* Sufficient time. Enough time between pre-test and post test for some changes in participants to take place should be allowed.
* Timeliness. The results of the evaluation should be available in time to use in decision making.
* School schedules. Data collection activities should be timed to fit school schedules.

4.4 Decision Events. Have review points been built into the evaluation process for making critical decisions?

A decision event or "milestone" in the life of a project is a pivotal point that requires an information-based review because several decision alternatives are possible. These decision alternatives are usually of three types: (1) to proceed without changes, (2) to make minor changes, or (3) to make major changes.

In an evaluation effort, decision-event reviews provide an excellent opportunity to have *external reviewers* or *evaluation auditors* review evaluations developed by in-house staff. As a device to lend credibility and objectivity to an evaluation effort, the involvement of external reviewers is less expensive than contracting the entire evaluation process externally.

The remainder of this unit covers three topics: (1) identifying and selecting decision events for review, (2) preparing for the review, and (3) conducting the review. For more information about decision-event reviews, see Walker, 1973.

Identifying and Selecting Decision Events

Important points in the life of a program should be identified as likely decision events. Some likely decision events in an evaluation effort would be:

- after drafting an evaluation plan but prior to implementing it
- after drafting an evaluation instrument but prior to collecting the data
- after drafting an evaluation report but prior to disseminating it

Each of these decision events is an important future-oriented step in an evaluation effort that could benefit from a reappraisal.

Preparing for the Review

A decision-event should include:

1. claims for the product (e.g., plan, instrument, report) being reviewed
2. information that supports these claims
3. decision alternatives (e.g., no changes, minor changes, major changes)
4. opportunity for specific comments and recommendations of the reviewers
5. a review process (e.g., mailing out the product to reviewers, bringing in consultants for the day, etc.), a time for the review, and persons to conduct the review

A sample decision-event review form for a career-education evaluation instrument is presented in Figure 5.

Figure 5

Sample Decision-Event Review Form for an Evaluation Instrument

Claim	Evidence	Decision*	Comments/Recommendations of Reviewers
Congruence. The items are logically derived from the program objectives and activities.	See instrument. See program objectives.	B	The items on job hunting emphasize different skills than the original objectives in this area.
Comprehensiveness. The items cover all significant aspects of the program.	See instrument. A test blueprint was used in developing the items.	C	Additional items should be developed to measure affective outcomes, e.g., attitudes toward learning, desire to work, self confidence, maturity, self-understanding, and interpersonal skills.
Importance. The items measure significant as opposed to trivial learnings.	See instrument. An advisory panel of teachers and students reviewed the instrument.	B	The items on decision-making skills are trivial.
Clarity. Instructions are clear, items are straightforward and unambiguous	See instrument. The instrument was pilot tested with a group of students.	A	Instructions are excellent. Items are clear and simply stated.

*Decision Alternatives
A = Adequate, no change
B = Minor changes
C = Major changes

A decision-event review is based upon the claims or standards for the product being reviewed. Three subsequent units of this handbook present standards for reviewing the three decision events described above. Standards for reviewing *evaluation plans* are presented in Unit 7. Standards for reviewing *evaluation instruments* are presented in Unit 8. Standards for reviewing *evaluation reports* are presented in Unit 11.

Conducting the Review

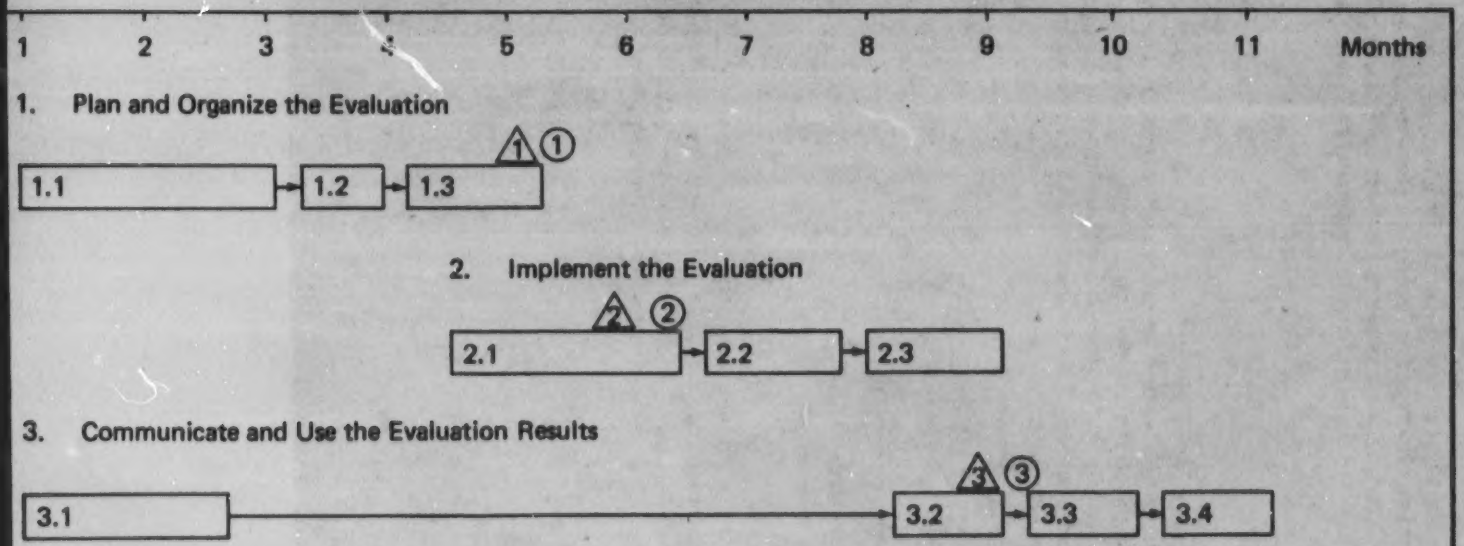
Reviewers may work on-site or in different locations, independently or as a team. In every case, the general charge is for the group to review claims and supporting evidence provided by program personnel and to look for discrepancies between those claims and the actual project. Reviewers should complete the review form and prepare written reports (before they leave the location if on-site) that include (1) their judgment of whether claims were achieved, (2) their rationale for reaching their conclusions, and (3) specific recommendations for improving the project.

Summary

The chart pictured in Figure 6 combines the components described in this section into one chart. Evaluation activities, symbolized by rectangles ▭, are scheduled over an 11-month time period. Evaluation products, symbolized by circles ○, and decision points, symbolized by triangles △, are drawn in at the point in time when they are scheduled to be completed.

Figure 6

Chart of Evaluation Activities, Products, and Decisions



Evaluation Activities = ☐

1. Plan and Organize the Evaluation
   - 1.1 Determine what information should be collected, who will use it, and how it will be used.
   - 1.2 Budget and assign staff for evaluation.
   - 1.3 Organize for evaluation by developing a scope of work, a timeframe, and role responsibilities.
2. Implement the Evaluation
   - 2.1 Develop/select instrument(s) for collecting the information
   - 2.2 Collect the information.
   - 2.3 Analyze and interpret the information.
3. Communicate and Use the Evaluation Results
   - 3.1 Build acceptance of the evaluation results.
   - 3.2 Prepare evaluation reports.
   - 3.3 Disseminate evaluation results.
   - 3.4 Use evaluation results.

Evaluation Products = ○

1. Evaluation plan
2. Evaluation instrument(s)
3. Evaluation report(s)

Decision Points = △

1. The evaluation plan is reviewed prior to implementing the evaluation.
2. The evaluation instrument(s) is reviewed prior to collecting the data.
3. The draft of the evaluation report(s) is reviewed prior to dissemination.

5. Staff. Should some type of expert evaluation services be sought?

The people who plan and implement an evaluation are essential to its success. The type of staff used in an evaluation influences the cost, quality, credibility, and usefulness of the evaluation results. This unit presents some alternative ways to staff for evaluation and some guidelines to locate, select, and use evaluation services. When possible the evaluator (if other than project staff) should be involved in the project as early as possible—perhaps even consenting to write the evaluation section of the proposal. The *staffing checklist* presents four important questions about your evaluation staffing.

✓ STAFFING CHECKLIST

Instructions: Check (✓) the appropriate response to each question.

Yes	No		
☐	☐	5.1	Credibility. Will the individuals who conduct the evaluation be perceived as credible?
☐	☐	5.2	Cost-Effective Staffing. Is the staffing for the evaluation cost-effective?
☐	☐	5.3	Qualifications for Evaluators. Do you know what qualifications are needed in an evaluator for your program?
☐	☐	5.4	Locating Staff. Do you know how to locate competent evaluation services?

5.1 Credibility. Will the individuals who conduct the evaluation be perceived as credible?

Credibility of an evaluation is enhanced when the evaluator has

- independence from the program, and
- expertise in evaluation

Evaluators should be protected from roles and situations that hamper their objectivity and ultimately their credibility. There are three common pitfalls that hamper the credibility of evaluators. These are:

- Role conflict. For example, a person who has helped to develop a program is asked to evaluate it.

* Conflict of Interest. For example, a professional colleague or personal friend is asked to conduct the evaluation.

* Cooptation. For example, the evaluator's job security or status would be threatened by negative evaluation results.

5.2 Cost-effective Staffing. Is the staffing for the evaluation cost-effective?

Cost and credibility are two key dimensions to consider when staffing for evaluation. It is desirable to set up organizational arrangements that provide maximum credibility at minimum cost.

A "ball park" estimate of the cost of an evaluation is 10 percent of the total project budget. However, the cost of evaluations can differ widely, depending on the scope of work and type of staffing.

More credible evaluations tend to be more costly because they typically involve longer time lines and the use of personnel with expertise in evaluation. However, there are compromises that keep quality high and costs low to moderate. These compromises generally combine the independence and expertise of external evaluation with the cost-saving features of internal evaluation. Figure 7 illustrates the relative cost and credibility of several ways to staff for evaluation, and the pros and cons of these methods are presented on page 55.

Figure 7

Credibility and Cost of Optional Ways to Staff for Evaluation

CREDIBILITY	COST		
	High	Moderate	Low
High	An external evaluator is contracted for at least 10 percent of program budget.	Independent auditor verifies the design and implementation of the evaluation at key decision events.	External reviews are systematically used at key decision events throughout the project.
Moderate	Internal project staff with competence in evaluation are assigned major responsibility.	Evaluation consultant provides technical assistance in designing an evaluation which is implemented by project staff.	External reviews are used at the end of the project only.
Low	Internal project staff are assigned major responsibility to evaluate but lack expertise in evaluation.	Internal project staff without evaluation expertise do the evaluation informally.	No one is assigned responsibility for evaluation.

Some pros and cons of these staffing options are highlighted below.

Pro	Staffing Option	Con
+ cheap	no assigned responsibility	– nothing gets done
+ are familiar with the project and the setting + know the people and the political constraints + have low cost	assign responsibility to current project staff	– usually lack expertise in evaluation – may experience role conflict or cooptation – lack credibility
+ have expertise in evaluation + are familiar with the project and the setting + know the people and the politics	hire evaluation expert(s) as part of project staff	– high in cost cost – may experience role conflict or cooptation – have only moderate credibility
+ have credibility + have expertise + are less susceptible to role conflict and cooptation	use externally contracted evaluation services	– moderate cost – may lack familiarity with the project, the setting, the people, the political constraints – may be too "ivory tower"
+ have checks and balances + have credibility + have expertise + have familiarity with project, etc.	use a combination of external evaluation services and internal project staff	– may range in cost from low to high

The optimal staffing pattern for evaluation uses some combination of external evaluation services and internal project staff. Several options are possible, for example: Have an independent third party conduct an audit of your evaluation (guidelines for using auditors are described on pages 28 to 30); bring in an evaluation consultant to design an evaluation which is implemented by project staff; collect advice from external reviewers at key decision events in the project (guidelines for conducting decision event reviews are discussed on pages 49 to 51).

5.3 Qualifications for Evaluators. Do you know what qualifications are needed in an evaluator for your program?

There are many important qualifications to consider when seeking evaluation staff or services. You can use the staffing-qualifications rating scale below to rate personnel that you are considering for evaluation roles. Simply circle the most appropriate rating for each characteristic and complete a total score.

STAFF QUALIFICATIONS RATING SCALE

High	Medium	Low			
					Methodological
3	2	1	*	1.	Knowledge of research: review and synthesize literature, conceptualize research problems, select inquiry strategies, formulate measurable questions to be answered, specify evidence necessary to answer the questions, apply research designs which control threats to validity and select samples.
3	2	1		2.	Knowledge of innovations in evaluation: know evaluation theory and models, use evaluation techniques from different disciplines, develop evaluation designs, translate broad goals into measurable objectives, assess needs, develop standards or criteria for judging program worth, report evaluation results in a useful and timely manner, develop recommendations, and administer evaluations.
3	2	1	*	3.	Knowledge of educational measurement: locate and select tests, develop cognitive tests, attitudes scales, interview schedules, surveys, opinionnaires, and other measuring devices, and validate instruments.
3	2	1	*	4.	Knowledge of statistics and data processing: choose and employ appropriate statistical tests, use canned computer programs, develop computer programs, use computers and computer related equipment, design and manage data banks, and interpret the results of data analysis.
					Substantive
3	2	1	**	5.	Familiarity with the background, operations, substance, political factors, and constraints of the program.
3	2	1	**	6.	Knowledge of career education.
					Personal
3	2	1	*	7.	Freedom from vested interests in the outcome of the evaluation.
3	2	1		8.	Fundamental agreement with the philosophy of the program to be evaluated.
3	2	1	*	9.	Reputation and status in the professional community.
3	2	1	**	10.	Trust and respect of the program staff.

*especially important for summative evaluations
**especially important for formative evaluations

Some rough guidelines for interpreting total scores on the staff qualifications checklist are presented below. However, remember that these qualifications may vary in importance for the evaluation of your particular program.

30-27	26-23	22-19	18-15	Below 14
Excellent	Very Good	Good	Fair	Poor

5.4 Locating Staff. Do you know how to locate competent evaluation services?

Career-education project directors may find it difficult to know when they are hiring a professionally competent and ethically responsible evaluation consultant. Lippitt (1974) states that "many a manager has soured on the use of consultants because of experience with inadequate results, lack of client readiness, inappropriate ethics, high costs, and minimum contribution to problem solving." There have probably been even more sour experiences with external evaluators than with other types of consultants. Yet, as explained in Section 5.1, outside consultants provide an independence and expertise that are often essential for obtaining credible evaluative information. One solution to the dilemma lies in learning how to select the right consultant. Six recognized methods of selecting a consultant (Lippitt, 1974) are as follows:

1. The client should determine the nature and scope of the project prior to negotiating with prospective consultants.

2. The client should review qualifications and experience of various consultants in relation to the project and should make a short list of consultants qualified for consideration.

3. The client should meet with each of these consultants to discuss the project and their approach to it, and should ask each of them to submit a one or two page prospectus and budget.

4. The client should check in depth the references of those consultants being seriously considered.

5. The client should then study the prospectuses in terms of each consultant's understanding of the problem, approach, probable benefits, costs, and particular ability to meet the requirements of the contract. In analyzing this information, the client should carefully consider the qualifications of the personnel who will *actually be working on the project.*

6. The client should base the final selection on a careful weighing of the above factors. Final negotiations should follow the selection of one consultant.

Martha Williams at The Network developed a *Program Evaluation Planning Packet* (1976) for project managers which outlines ten tips for consumers of evaluation consultant services. These are:

1. Solicit recommendations for evaluation consultants from other consumers—project directors, school district administrators, state department of education personnel, or a human resource file.

2. Find an *educational* evaluator, not simply a person with strong statistical or computer background. The consultant should have experience in evaluating educational projects (both process and product evaluation) and be familiar with design constraints and alternatives.

3. When you have identified candidates, ask them for names of other clients they have served. It's wise to talk with a few others who have worked with the consultant to learn about his or her style, expertise, and ability to work within a schedule.

4. Choose a consultant easily accessible to the project. A consultant who is geographically close to the project site can be available for meetings, on-site data collection and reporting, and other aspects of the formative evaluation process. Also, keeping travel costs down helps to make the evaluation cost-effective.

5. Determine the cost of evaluation in advance, based on what is budgeted or what can be transferred to an evaluation line item. A good rule of thumb established the cost of evaluation between three and eight percent of the total project budget.

6. Negotiate with the consultant for frequent on-site visits to discuss procedures, interim results, and problems which arise.

7. Contract carefully with the consultant. When formulating a contract with an outside evaluation consultant, the following things should be considered: (a) who has title to the data—make certain that the project, not the evaluator, has that title; (b) the exact terms of the evaluation—what is expected of whom, when; (c) the number of days on-site; (d) the itemized budget for the evaluation; and (e) a cancellation clause allowing 30-day notice for cancellation of the contract for both the project and the evaluator. The contract should be in writing, signed by both client and consultant.

8. Be sure the consultant is introduced to and accepted by key individuals involved in the evaluation. If the consultant meets resistance in obtaining data, the evaluation will be weakened.

9. Consider having the consultant conduct in-service sessions for project staff and teachers to acquaint them with the purposes and procedures of evaluation. Be sure staff understand the way in which the results of the evaluation will be used.

10. Establish the evaluation design as a cooperative effort involving the project director, the project staff, and the evaluator. This involvement will increase the usefulness of the study and results, take into account reality factors and limitations, and insure that the consultant's interests and orientation don't overly influence the design.

6. Responsibility/Authority. Have the program staff and evaluator agreed on their respective tasks?

The relationship between an evaluator and the program staff is a critical element in the success of an evaluation. Most of us are somewhat threatened by the prospect of being evaluated. We may become especially wary when the evaluator is external to the project. There is a fear that the evaluator may not fully understand the project—its history, setting, constraints, philosophy, activities, and outcomes. There is also a fear the evaluator will impose his/her own values on the program or will have a different philosophy of career education than that emphasized by the program. Another common fear is that the evaluator will pursue the perfect research design and thus miss the true impact of the program.

The evaluator also has fears. The evaluator may fear that his/her hands will be tied by the project staff and thus be prevented from taking an objective view of the program. The evaluator may fear that less than positive results about the program may cause problems or that probing items may be deleted from instruments.

Some of the fears can be allayed by clarifying roles, responsibilities, and authority for the program staff and the evaluator at the outset of an evaluation effort. The *Responsibility/Authority Checklist* summarizes some areas where clarity and agreement are essential.

√ RESPONSIBILITY/AUTHORITY CHECKLIST

Instructions: Check (✓) the appropriate response to each question.

Yes	No		
☐	☐	6.1	Evaluator-Administrator Responsibilities. Have responsibilities been clearly defined for the administrators and evaluators?
☐	☐	6.2	Evaluator—Administrator Authority. Is there agreement about the evaluation decisions and who will make or be involved in them?
☐	☐	6.3	Communication/Protocol. Have the channels of communication among the project sponsors, project director, project staff, and the evaluator been established?
☐	☐	6.4	Disagreements. Are there procedures for resolving disagreements between program staff and evaluators if and when they arise?

6.1 Evaluator–Administrator Responsibilities. Have responsibilities been clearly defined for the administration and evaluations?

"An evaluator is a resource and should not be supervised by the administrator. The relationship should be much like that of a doctor-patient or lawyer-client–while the client maintains the final veto power, the evaluator has discretion and freedom to propose and eventually implement methodological practices. Obviously, these must be agreed to by the client before they are initiated." (Adams and others, 1976)

Decisions about who should take responsibility for various evaluation activities should be made at the outset of the evaluation process. These decisions should be based on the answers to such questions as:

- Would the activity benefit from evaluation expertise?
- Should the activity be performed by an independent party to enhance the credibility of evaluation results?
- Should the activity be performed by someone who is intimately familiar with the project to insure that the evaluation will provide useful information to relevant audiences?
- Should the activity be performed by project staff to conserve resources?

A sample division of the responsibilities between evaluation and administration has been drawn up using the above guidelines. Figure 8 on page 61 lists some activities typically performed in an evaluation and a potential division of responsibility between evaluators and administrators for each activity.

There is an important balance to maintain between the respective roles of evaluators and program staff. Program staff should help insure that:

- the program is evaluated *fairly*
- the *evaluator's values* do not unduly influence the direction of the evaluation
- *checks and balances* are used in the evaluation process to incorporate alternative points of view and prevent a one-sided evaluation
- there are frequent *opportunities for interaction* between teachers (or other program staff) and the evaluator in order to report on progress and share concerns

On the other hand, the evaluator must help ensure that:

- the evaluation of the program is as *objective, impartial,* and *unbiased* as possible
- evaluation instruments allow the respondent to provide *honest* rather than "socially acceptable" *responses*

- the evaluation instruments ask *probing* questions
- the evaluation instruments delve into the *weaknesses as well as the strengths* of the program
- *negative findings* are reported honestly
- findings are carefully qualified and are *free of exaggeration* or overstatement

Figure 8

Evaluator–Administrator Responsibilities

Evaluation Activity	Responsibility
1. Plan the Evaluation, including	
– Determing what information should be collected, who will use it, and how it will be used	EA*
– Budgeting and assigning staff for evaluation	A
– Organizing for evaluation by scheduling activities and products and determining role responsibilities	AE
2. Implement the Evaluation, including	
– Developing or selecting instruments for gathering information	EA
– Collecting the information	Ea
– Analyzing and interpreting the information	Ea
3. Communicate and Use the Results	
– Building acceptance for the results	Ae
– Preparing evaluation reports	Ea
– Disseminating evaluation results	Ae
– Using evaluation results	Ae

*Key
A = Administrator
E = Evaluator
– = Placement first indicates major responsibility; placement second indicates less responsibility.
– = Capital letters indicate major input: small letters indicate less input.

6.2 Evaluator–Administrator Authority. Is there agreement about the evaluation decisions and who will make or be involved in them?

Clarifying decisions and roles can be facilitated by constructing a decision-by-person matrix that specifies what person:

- program evaluator
- program director
- project monitor
- advisory committee (chairperson)
- school board (chairperson)

signs off in what way–

- approves/disapproves
- reviews, or
- is informed

on what decisions–

- objectives for the evaluation
- evaluation instruments
- final version of the evaluation report, or
- distribution of evaluation reports

Some of the critical decision areas which should be included in a decision-by-person matrix are highlighted below.

- Editing instruments. Who decides what items are included or excluded from evaluation instruments?

- Editing reports. Who decides what information is included or excluded in the evaluation reports?

- Disseminating reports. Who decides what audiences may receive the evaluation reports?

- Passing judgments. To what extent will the evaluator interpret the results and draw conclusions about the sum worth of the program?

A partial example of a decision-by-person matrix is presented in Figure 9.

Figure 9

Partial Example of Decision-by-Person Matrix

	Person*		
Decision	Approves/ Disapproves	Reviews	Is Informed About
Final editing of evaluation instrument	PD PE	AC SB	PM
Release of evaluation report	PD PM	PE	AC SB

*Person: PD=Program Director, AC=Chairperson of the Program Advisory Committee, SB=Chairperson of the School Board, PE=Program Evaluator, PM=Project Monitor.

6.3 Communication/Protocol. Have channels of communication been established?

Should the evaluator have direct contact with the project sponsor or go through the project director? Should the evaluator have direct contact with project staff or go through the project director? What protocol should be followed in contacting various schools, classrooms, etc. where data will be collected? It is essential that clear channels of communication are established and that appropriate protocol is followed in an evaluation.

6.4 Disagreements. Are there procedures for resolving disagreements between program staff and evaluators?

Because evaluations are sensitive and value-laden, disagreements usually arise. Teachers may feel that their views have not been fairly represented in the evaluation. The project director may feel that the evaluation has been unfairly harsh on the program. The evaluator may feel that a group of items, although controversial, will provide valuable insights about a program.

To avoid as many disagreements as possible, program staff and evaluators should maintain frequent communication. Two-way exchanges of information about the progress of the evaluation design, instruments, activities, programs, and new developments are essential. However, even with frequent communication some disagreements are likely to occur; perhaps the most common are riffs between teachers and evaluators. Because of the nature of evaluation, some disagreements will not be possible to resolve to everyone's satisfaction. Nevertheless, strategies for arbitrating disagreements, resolving conflicts, and gaining consensus should be devised for use in these situations.

7. Uniqueness. What unique features of career education influence its evaluation?

Evaluation has problems and processes that are common to all types of programs. However, career education has some unique features that must be considered in designing an evaluation of such programs. The *Uniqueness Checklist* summarizes some of the unique features of career education.

√ UNIQUENESS CHECKLIST

Instructions: Decide whether the following features of career education have been considered in designing your evaluation by checking (✓) the appropriate box.

Yes	No	
☐	☐	7.1 The evolving definition of career education
☐	☐	7.2 Disparate philosophies of career education
☐	☐	7.3 Illusive criteria for deciding if career education has truly made a difference
☐	☐	7.4 Differing theories of how career development takes place
☐	☐	7.5 Difficulty of measuring affective career-education outcomes

7

7.1 Evolving Definition of Career Education.

Career education is an evolving and elusive concept. Just when you feel you understand career education, the philosophies and trends shift. Consequently, many different frameworks, lists of goals and objectives, elements, and instruments for career education have been developed. There are also divergent points of view about what is and what is not career education as well as how it should be delivered. The concept of career education varies from helping prepare learners for job roles to helping prepare them for roles in the family and in society, as well as for activities in their leisure time. The delivery of career education varies from infusion of career education concepts into the entire school curriculum to specific career education courses and units. Career education may have as many definitions as there are teachers, counselors, and others involved in its delivery. Some career education programs have no underlying definitions, theory or philosophy to give the program direction.

Because career education is constantly changing and often highly individualized, it is difficult to measure and summarize its impact on students. But the problems are not insurmountable. It is

important to clarify and delimit what you are trying to achieve through career education before embarking on an evaluation. Then a variety of evaluation approaches that measure the various facets of a career-education program can be quite effective. The areas of impact common to all techniques can then be summarized. Review again the variety of approaches described in Unit 1 ("Purpose") to find an approach or combination of approaches that will fit your unique situation.

7.2 Disparate Philosophies of Career Education

Most people from educators to assembly line workers to corporate presidents have an opinion about career education. And there are many different opinions about the role of career education in our society. Some believe that career education is a process of providing systematic information and experiences to assist a person's career development. Others believe that career education is propaganda for capitalism and the protestant ethic of "hard work is its own reward." Still others believe that career education is creating unrealistic expectations about the pleasures and satisfactions to be derived from working when, in fact, much work is not pleasant. An individual's philosophy of career education will strongly influence the way an evaluation of a career education program is conceptualized and received. Therefore, clarity and agreement about the underlying philosophies of career education among program staff, sponsors and evaluators is essential for an effective evaluation.

7.3 Illusive Criteria.

"Big criteria have little criteria that follow around behind them." Career education opens up a vast array of outcomes that schools have not been held directly accountable for in the past. In basic skills it has been enough to prove that schools have helped students accomplish minimal competency in the 3 R's. But in career education, proving only that kids have better self-awareness or career awareness may not be sufficient. Critics ask "so what?" If students have self-awareness, will they make more informed career decisions? If students make more informed career decisions, will they have greater personal and occupational satisfaction? There is an almost endless chain of outcomes, and it is necessary to identify the most important ones in order to evaluate whether career education has truly made a difference on a student's career development.

7.4 Differing Theories of How Career Development Takes Place.

Career Development is a complex and highly individualized process. We do not yet know enough about how career development occurs to measure it confidently. Although some authors claim to have developed tests or kits of instruments that validly measure career development, these tests are limited by our limited knowledge of the career development process. At this time, there are few valid and reliable measures of selected aspects of career development. Therefore, claims about what a career education instrument is measuring should be carefully qualified.

7.5 Difficulty of Measuring Affective Career Education Outcomes.

Career education often emphasizes affective outcomes, such as increased self-awareness, improved work attitudes, clarified work values, and more productive work habits. Affective measurement presents some unique problems. Affective outcomes are typically more difficult to measure than cognitive or psychomotor outcomes. Less is known about affective variables and how they are formed and changed. It is often difficult to parcel out the affective outcomes that the career education program has helped produce. Attitudes, values, and appreciations are intimately linked to an individual's personality and background.

A person's total environment influences attitude, growth, and change. Thus, it is very difficult to determine when and how much affective qualities are being influenced by career education. Changes in attitudes, values, and appreciations are difficult to detect through paper and pencil evaluation instruments.

8. Planning Standards. How do you recognize a good evaluation plan?

This unit summarizes key ingredients in a good evaluation plan. It also outlines some criteria for assessing the overall quality of an evaluation plan. Two summary checklists are provided. The *Checklist of Parts for an Evaluation Plan* can be used with the *Checklist of Criteria* to assess the overall quality of your evaluation plan. It would be appropriate to use either or both in a decision-event review (see Unit 4 pages 49 to 51 for more information).

√ CHECKLIST OF PARTS FOR AN EVALUATION PLAN

Instructions: Rate your evaluation plan by checking (✓) the appropriate response about the parts and the phrasing of your plan.

		Well Stated	Needs Better Statement	Not Stated	Not Applicable
Conceptual Plan					
8.1	Statement of purpose?	☐	☐	☐	☐
8.2	Questions to be addressed?	☐	☐	☐	☐
8.3	Audiences to be served?	☐	☐	☐	☐
8.4	Potential uses of the results?	☐	☐	☐	☐
8.5	Overview of activities?	☐	☐	☐	☐
8.6	Evaluation products to be developed?	☐	☐	☐	☐
Management Plan					
8.7	Organizational locus of evaluation (e.g., internal or external, line or staff)?	☐	☐	☐	☐
8.8	Policies and procedures affecting the evaluation?	☐	☐	☐	☐
8.9	Staffing?	☐	☐	☐	☐
8.10	Role responsibility and authority?	☐	☐	☐	☐
8.11	Budget?	☐	☐	☐	☐
8.12	Facilities and equipment?	☐	☐	☐	☐
8.13	Time lines for activities and procedures?	☐	☐	☐	☐
8.14	Decision events and standards for monitoring the evaluation process?	☐	☐	☐	☐
Technical Design					
8.15	Data gathering instruments?	☐	☐	☐	☐
8.16	Data gathering procedures?	☐	☐	☐	☐
8.17	Sampling plan?	☐	☐	☐	☐
8.18	Data storage and retrieval procedures?	☐	☐	☐	☐
8.19	Data analysis procedures?	☐	☐	☐	☐
8.20	Data interpretation procedures?	☐	☐	☐	☐
8.21	Procedures for reporting the results?	☐	☐	☐	☐
8.22	Procedures for disseminating the results?	☐	☐	☐	☐

CHECKLIST OF CRITERIA FOR REVIEWING EVALUATION PLANS*

Instructions: Rate your evaluation plan against the following criteria by checking (✓) the appropriate response.

Yes	No		
☐	☐	8.1.	Scope. Does the range of information to be provided include all significant aspects of the program being evaluated?
☐	☐	8.2.	Relevance. Does the information to be provided serve the information needs of the intended audiences?
☐	☐	8.3.	Flexibility. Does the evaluation plan allow for new information needs to be met as they arise?
☐	☐	8.4.	Feasibility. Are the resources of time and money adequate to carry out the evaluation as planned?
☐	☐	8.5.	Reliability. Will the information be collected in such a way that if someone repeated the study they would obtain similar findings?
☐	☐	8.6.	Objectivity. Have provisions been made to help eliminate bias in data collection and processing?
☐	☐	8.7.	Representativeness. Will the information collected accurately and fairly portray the program?
☐	☐	8.8.	Timeliness. Will the information be provided in time to be of use to the audiences for the evaluation?
☐	☐	8.9.	Pervasiveness. Will the information be provided to all who need it?
☐	☐	8.10.	Ethical considerations. Will the evaluation guarantee confidentiality and protection for those who provide information?
☐	☐	8.11.	Protocol. Are conventional protocol steps planned for contracting people in the appropriate sequence and for following existing policies and procedures?
☐	☐	8.12.	Security. Have provisions been made to maintain the security of the evaluation data?
☐	☐	8.13.	Credibility. Does the design of the evaluation encourage trust in the results by relevant audiences?
☐	☐	8.14.	Cost-effectiveness. Compared to its potential payoff, will the evaluation be carried out at a reasonable cost?

*Adapted from James R. Sanders and Dean H. Nafziger, (1976).

IMPLEMENTING THE EVALUATION

This part of the handbook is brief because there are numerous excellent resources available on implementing an evaluation. Implementing an evaluation includes activities such as:

- developing, pilot testing, and revising instruments
- selecting a research design
- developing a sampling plan and data collection schedule
- selecting appropriate statistics for analyzing the data
- collecting the data
- coding, keypunching or tallying, and storing the data
- analyzing the data by hand, calculator, or computer
- summarizing the data into tables, charts, etc.

Basic introductory texts on research, measurement, and statistics are the most comprehensive sources for learning more about these topics. Some recommended resources are:

Research

Best, J. W. *Research in Education* (3rd edition) Prentice-Hall, 1977.

Measurement

Ebel, Robert L. *Measuring Educational Achievement.* Englewood Cliffs, New Jersey: Prentice-Hall, 1965.

Thorndike, Robert L. (ed.) *Educational Measurement.* Washington, D.C.: American Council on Education, 1971.

Statistics

Guilford, J. J. *Fundamental Statistics in Psychology and Education.* New York: McGraw Hill, 1965.

This part of the handbook focuses on one of the most critical aspects of implementing an evaluation—insuring that the data collection instruments will provide accurate, useful, and comprehensive information for making decisions about your program. For more detailed information about developing evaluation instruments for career education, see *A Guide for Improving Locally Developed Career Education Measures* (McCaslin and Walker, 1977), in this Career Education Measurement series.

9. Instrument Standards. How do you recognize a "good" evaluation instrument?

This unit contains guidelines for deciding if an instrument will . . .

- provide the information you and others most need to know about the program and
- provide reasonably accurate information.

Evaluation instruments can be very broadly divided into two categories:

1. those that seek objective information, such as facts statistics, and direct measurement of knowledge, skills, or behaviors.
2. those that seek subjective information, such as perceptions of needs, opinions, attitudes, self-assessments of interests or abilities, and ratings or program quality

The following checklist is designed to help you review both types of instruments systematically in order to assess their quality. The checklist could also be used in a decision-event review by external reviewers (see Unit 4, page 49 for more information.)

√ INSTRUMENT CHECKLIST

Instructions: Rate your evaluation instrument against the following criteria to determine its strengths and weaknesses. Check (✓) the appropriate box for each item.

Yes	No	
☐	☐	9.1 Relevance. Is the instrument appropriate for the program? Do the items describe outcomes that are actually being sought in the program?
☐	☐	9.2 Importance. Do the items describe outcomes that are significant for students to master?
☐	☐	9.3 Practicality. Do the items describe outcomes the program can realistically change in the amount of time available? (For example, some outcomes—self-concept, work values, etc.—change more slowly than others. Some outcomes—career placement, satisfaction, advancement, etc.—may be too distant to be affected by the program.)
☐	☐	9.4 Measurability. Is it feasible to measure the dimensions that the instrument is attempting to measure with the resources available? (Some dimensions, especially in the affective domain, are more difficult and time-consuming to measure precisely.)

Yes	No		
☐	☐	*9.5	Balance/Comprehensiveness. Do the items on the instrument represent a balance of information about all the important aspects of the program?
☐	☐	9.6	Objectivity. Are the instructions and items worded in such a way that people will respond honestly rather than in a "socially acceptable" way?
☐	☐	9.7	Attractiveness. Is the instrument designed to encourage complete and thoughtful responses? Does it have complete and clear instructions, legible print, attractive layout, and reasonable length?
☐	☐	9.8	Clarity. Can the items be easily understood? Are they free from ambiguity?
☐	☐	9.9	Readability. Do the items use as few words as possible to communicate? Is the reading level appropriate for the individuals to be tested?
☐	☐	**9.10	Challenge. Is the right answer so obvious that most students can answer it from common sense? Is the right answer so obscure or tricky that everyone misses it?
☐	☐	**9.11	Differentiation. If the test is norm referenced, has each item been tested to ensure that it differentiates between students with the highest and lowest ability?
☐	☐	9.12	Sex/Race Fairness. Are the items free from stereotypes by sex or race?
☐	☐	9.13	Manageability. Do your staff have the time and expertise to summarize and analyze the information being collected? (For example, responses to open-ended questions will take more time and experience to interpret.)
☐	☐	9.14	Validity. Has the validity of the instrument been systematically tested and reported?
☐	☐	9.15	Reliability. Has the reliability of the instrument been systematically tested and reported?
☐	☐	9.16	Item Analysis. Has an item analysis been conducted and used to improve the test?
☐	☐	9.17	Pilot Testing. Has the test been tried out with a group of typical respondents and revised to include their feedback?
☐	☐	9.18	Usefulness. Has a use been determined for *each* piece of information to be collected. Have the items with no apparent use been eliminated or modified?

*This criteria applies only to subjective items.
**This criteria applies only to objective items.

COMMUNICATING AND USING EVALUATION RESULTS

Evaluation is an arduous undertaking, so it is unfortunate when evaluation findings are not used. As discussed in the introductory section of the handbook, there are various reasons why evaluation results are not used. The results may arrive too late for making decisions. The results may be too vague, complex, unclear, or redundant. The results may not be disseminated effectively through various channels, or they may not be shared in a manner that communicates what they mean and how to use them.

This section provides guidelines and techniques for increasing the use of evaluation results to improve programs, make data-based decisions, and keep the public informed of program processes and outcomes.

This section contains four units:

- Unit 10 provides ideas for dealing with the political factors that affect use of evaluation results.
- Unit 11 provides two checklists. One checklist is for reviewing the parts of an evaluation report for completeness of information. The second checklist provides criteria for assessing the accuracy, utility, and feasibility of evaluation reports.
- Unit 12 provides guidelines for sharing the results of evaluations with different audiences through popularized reports, multiple short reports targeted for different audiences, executive summaries, news releases, presentations, and other media.
- Unit 13 provides advice on using evaluation results to bring about change. Strategies for overcoming personal and organizational barriers and ways to facilitate use of evaluation results are discussed.

10. Politics. What political factors might affect use of the evaluation results?

Evaluations are in part political activities and thus are susceptable to political influences. Evaluations are conducted to help decision makers decide who gets what, so the political influences on evaluation whether subtle or blatant, are numerous. Have you considered the political factors that influence your program and its evaluation? Many may be unique to your situation; some, such as those presented in the following checklist, are widespread. Brickell (1975) has developed a series of scenarios that describe political influences on evaluation, and the following checklist is based on his work.

√ POLITICS CHECKLIST

Instructions: Consider each of the following factors and indicate whether it influences your program by checking (✓) the appropriate box.

Yes	No		
☐	☐	10.1	Political motivation. Was the evaluation initiated for basically politically reasons?
☐	☐	10.2	Payoff. Does the payoff for coming up with positive findings overshadow the payoff for conducting an effective evaluation?
☐	☐	10.3	Negative findings. Have you thought about how you would handle unfavorable or nonsignificant findings about your program?
☐	☐	10.4	Realistic criteria. Is your evaluation using realistic criteria for success?
☐	☐	10.5	Decision influences. Will other sources of information besides the evaluation results be used to decide the future of your program?
☐	☐	10.6	Slanted evaluation. Is the evaluation being unjustly slanted in either a negative or positive direction?

1C

10.1 Political Motivation.

Evaluations are initiated for a variety of political reasons: to appease adversaries of a program, to reap a reward such as special funding or exemplary status, or to comply with requirements (even when there is no real interest in using the results). Evaluations are seldom initiated from a truly objective, apolitical point of view.

10.2 Payoff.

The payoff for evaluators, program directors, and funding sponsors is usually to come up with *positive* evaluation results. Professional courtesy and a desire for continued business often make an evaluator just as anxious for positive results as the program staff. Evaluators have been known to sit on the sidelines throughout the evaluation voicelessly cheering "Make a significant difference." Program directors and staff naturally want to see their program praised and evaluated favorably. Even project monitors and funding sponsors want positive evaluations. After fighting to secure funds for a program, helping to nurse it through the rough spots, and praising the program to constitutents, project sponsors are much happier when an evaluation reveals positive outcomes.

Political pressures may encourage an evaluator to eliminate or play down negative findings in reports and thus present an inaccurate or misleading picture of the program. It is your role to facilitate an effective and objective evaluation of your program.

10.3 Negative Findings.

A wise saying, first espoused by Rossi (1972), is "no good evaluation goes unpunished." Evaluations can usually be discredited on some basis: inaccurate data, faulty instruments, misunderstanding the program, incompetent interviewers, biased data interpretations, slanted writing tone, etc. If someone is not satisfied with the results of an evaluation, it is often easy to find weaknesses in the report.

Encourage your evaluator to provide specific and balanced information about the program's strengths and weaknesses. Ask for constructive feedback so the weaknesses of the program can be improved.

10.4 Realistic Criteria.

Evaluations are sometimes conducted with unrealistic criteria. For example, a program to provide in-service training for teachers in career-education infusion tactics may be evaluated using student learning as the criterion. It would be difficult for even the best teacher-training program to make significant, measurable differences on student learning. An evaluation using this criterion would probably be disappointing.

10.5 Decision Influences.

Evaluation results are usually treated as only one basis for making decisions. Consequently, a program with highly positive results may be

terminated because its substance is not a high priority item in a given year. Another program may have had no measurable impact but receive double funding after an especially effective testimony before legislators.

10.6 Slanted Evaluation.

The art of evaluating career education is at an early stage of development. Because the evaluation tools are limited, it is impossible to have clear-cut, totally decisive evaluation findings. Given the state of the art, it is possible to use evaluation in some instances as a pawn. Two evaluations of the same program could have directly opposing results—one positive, the other negative.

11. Report Standards. How do you recognize a good evaluation report?

A "good" evaluation report can take a variety of forms. It may be short or long. It may be communicated in writing or through face-to-face dialogue. It may be highly statistical or primarily descriptive and anecdotal in orientation. The type of report which is prepared depends on the type of program, purpose of the evaluation, and type of audience to which the results are being communicated.

This unit highlights the critical components of an evaluation report, elaborates on the content making up these components, and summarizes some criteria for judging the overall quality of the report.

No two evaluation reports can be expected to have exactly the same format and writing style, but most reports should contain the following five components:

Cover page	Evaluation procedures
Recommendations	Results
Introduction	

Further information about each of these components is provided below. (adapted from Adams, 1976)

11.1 Cover Page.

The cover page may give a descriptive title to the evaluation study, such as "Formative Evaluation Report for the Career-Education Infusion Strategy Workshop." If the report is informal rather than technical, then an informal title, such as "Results and Recommendations for the Career Education Infusion—Strategy Workshop" may be more appropriate. If for a lay audience, then a more "catchy" title may be appropriate, such as "Report Card on a Career Education Workshop."

This cover page should contain, in addition to the title, the date of the report, the dates of the project, the author of the report, and the notation that it is an evaluation report. If the report is for a limited, specified audience, the names of those authorized to see it may be included in a statement of the privacy of the information.

11

11.2 Recommendations.

The recommendations generated as a result of the data analysis should be very accessible. If they are not presented on the first page, their location should be stated on the first page. Each recommendation should generally be related to a specific decision faced by a reader or set of readers of the report. In many ways the recommendations are the culmination of the study. The entire impact of the evaluation may rest on the clarity, relevance, and credibility of the recommendations. In a technical report, each recommendation should generally be related to specific data.

11.3 Introduction.

The introduction should provide a description of the project/activity evaluated and a brief overview of the purpose of the evaluation study and the intended audiences for the evaluation report.

11.4 Evaluation Procedures.

This section should include descriptions of the instruments used, the overall evaluation framework, the limitations of the study, and the sources from which data were collected. If the report is technical, the procedures may appropriately be written in a style similar to an experimental study. If the report is popular, the procedures should be briefly described in non-technical language.

11.5 Results.

The results should be presented both in simple summary tables when appropriate and in a short summary description. If the report is of a technical nature, the results may need to be reported in detail so that they can be related to each recommendation.

✓ CHECKLIST FOR RATING THE COMPONENTS OF THE EVALUATION REPORT

Instructions: Examine your evaluation report with respect to the following list of components by checking (✓) the appropriate responses.

			Well Stated	Needs Better Statement	Not Stated	Not Applicable
11.1	Cover page		☐	☐	☐	☐
11.2	Recommendations		☐	☐	☐	☐
11.3	Introduction					
	11.3.1	Purpose of the evaluation	☐	☐	☐	☐
	11.3.2	Questions to be answered	☐	☐	☐	☐
	11.3.3	Audiences to be served	☐	☐	☐	☐
	11.3.4	Document needs for the program	☐	☐	☐	☐
	11.3.5	Subject matter	☐	☐	☐	☐
	11.3.6	Objectives of program	☐	☐	☐	☐
	11.3.7	Instructional procedures/ program activities	☐	☐	☐	☐
	11.3.8	Participants: characteristics, type, and number involved	☐	☐	☐	☐
	11.3.9	School setting and staff involvement	☐	☐	☐	☐
	11.3.10	Community setting and involvement	☐	☐	☐	☐
	11.3.11	Costs: total and per pupil, amount needed for initial start-up and for continuation	☐	☐	☐	☐

11

		Well Stated	Needs Better Statement	Not Stated	Not Applicable
11.4	Evaluation Procedures				
11.4.1	Overall framework	☐	☐	☐	☐
11.4.2	Information sources (population, sample)	☐	☐	☐	☐
11.4.3	Data collection procedures/research design	☐	☐	☐	☐
11.4.4	Instruments used	☐	☐	☐	☐
11.4.5	Data analysis procedures	☐	☐	☐	☐
11.4.6	Limitations, constraints, and possible sources of bias	☐	☐	☐	☐
11.5	Results				
11.5.1	Program outcomes in relationship to needs of constituency	☐	☐	☐	☐
11.5.2	Attainment of objectives	☐	☐	☐	☐
11.5.3	Unintended outcomes and social benefits	☐	☐	☐	☐
11.5.4	Cost-effectiveness	☐	☐	☐	☐
11.5.5	Value of the outcomes	☐	☐	☐	☐
11.5.6	Conclusions	☐	☐	☐	☐
11.5.7	Summary	☐	☐	☐	☐

√ CHECKLIST FOR RATING THE OVERALL QUALITY OF THE EVALUATION REPORT

Instructions: Rate your evaluation report according to the following criteria by checking (✓) the appropriate responses.

Yes	No		
			Accuracy
☐	☐	11.1	Validity. Does the evaluation evidence present a true and fair picture of the program?
☐	☐	11.2	Reliability. Would someone repeating the evaluation obtain similar findings?
☐	☐	11.3	Appropriate analysis. Is the evaluation information analyzed with appropriate techniques?
☐	☐	11.4	Credible conclusions. Are the conclusions legitimately drawn from the findings?
☐	☐	11.5	Objective reporting. Are the results presented and interpreted credibly, in the context in which they were collected, without overstatement?
			Utility
☐	☐	11.6	Information scope, selection, and balance. Does the report focus on the most significant aspects of the program being evaluated?
☐	☐	11.7	Audience accommodation. Is the report written with the audience's values, information needs, and level of knowledge in mind?
☐	☐	11.8	Timeliness. Is the report timed appropriately to facilitate use?
			Feasibility
☐	☐	11.9	Realistic. Is the report constructive, specific, action-oriented, and sensitive to the resources available for program improvement?
☐	☐	11.10	Readibility. Is the language, length, and organization appropriate to reader's needs?
☐	☐	11.11	Political viability. Does the report illustrate knowledge of and sensitivity to the political context in which the program operates?

11

12. Dissemination. What techniques will be used to disseminate the evaluation findings?

The following checklist illustrates some techniques that can be used to communicate evaluation findings to varied audiences.

√ DISSEMINATION CHECKLIST

Instructions: Survey the six techniques listed below and check the ones that would be most appropriate for sharing your evaluation findings.

Yes	No		
☐	☐	12.1	Comprehensive technical report.
☐	☐	12.2	Technical report supplement with detailed recommendations for improvement for the program staff.
☐	☐	12.3	Executive summary.
☐	☐	12.4	Multiple short reports targeted to the information needs of different audiences.
☐	☐	12.5	Popularized reports.
☐	☐	12.6	News releases.
☐	☐	12.7	Oral presentation.
☐	☐	12.8	Audiovisual presentation.

12.1 Comprehensive Technical Report.

A technical report is a comprehensive description of the evaluation procedures, the program itself, and the evaluation findings with concluding interpretations and recommendations. The technical report is intended as a back up or source document and should have limited distribution. It would be appropriate for the funding sponsor and the key decision makers who are closely involved in the program.

12.2 Technical Report Supplement.

An appendix or supplement can be added to the copies of the technical report intended for the program staff. This supplement (for in-house review) would contain in-depth information about specific aspects of the program that need to be improved. This supplement might also contain information that is somewhat sensitive or so highly detailed that it would be of interest only to the program staff.

12

12.3 Executive Summary.

Most audiences receiving an evaluation report are more interested in the results than in the methodology. In addition, most audiences cannot afford the time to read carefully a well-documented and lengthy evaluation report. The executive summary is designed to present a brief overview of the procedures, the important findings, and the general recommendations. Obviously, all the material presented in the executive summary is contained in the technical report. This summary, usually one to ten pages in length, should make reference to the availability of the technical report. The reader of the summary can glean the important aspects of the study and, if interested, can pursue more detailed information in the technical report. This technique keeps busy administrators informed and increases the potential for utilization of the evaluation data and results.

12.4 Multiple Short Reports.

If there are more than one audience for the evaluation results, several rather short reports targeted for specific audiences may be more feasible than a technical report and an executive summary. Brickell (1974) found that decision makers prefer short (1 page) and medium (10 pages) reports over longer reports. Brickell also found that most decision makers request short reports for themselves and longer ones for their subordinates; however, when their subordinates were queried they requested short reports for themselves and longer ones for their subordinates, and so on down the hierarchy.

12.5 Popularized Reports.

A popularized report is a medium length (10-30 pages) report written without sophisticated terminology in a newsy, informative style. The popularized report provides a brief overview of the evaluation procedures and describes the program, especially unique or unusual activities, and the results of the evaluation. The results might be portrayed through anecdotes about the impact of the program on individual students as well as summaries of the major findings, conclusions, and recommendations.

12.6 News Releases.

Brief highlights of the evaluation findings can be communicated through local newspapers, newsletters, brochures, T.V. spots, and other media. An example of a news release is presented in Figure 10 on page 89.

12.7 Oral Presentation.

If the audiences of the evaluation report are not academicians or administrators, oral presentations may have more impact than written ones. Even if the audiences are academicians or administrators, a formal oral presentation should be made. The oral presentation would include:

- a short statement on the purposes of the evaluation
- highlights of evaluation techniques and results for each evaluation purpose

Figure 10 Sample News Release

Shabazz 'Report Card' Good, With Exceptions

By RICHARD HAWS
Of The State Journal Staff

Malcolm Shabazz experimental high school was found Monday night to be "fairly effective overall in meeting student needs."

But in a report on the three-year-old school presented to the School Board, there were some "questions as to the structure and direction of the program."

The report, the work of a citizen committee of the East Educational Area Advisory Council, spoke of the "impression of disorganization."

'Lack of Involvement'

Most frequently mentioned as a weakness of the school was the "lack of involvement by some students."

"Many parents feared that a large number of students were not attending classes and not participating in the program," the report said.

Donald Hafeman, East Area attendance director and in charge of the school at 314 N. Sherman Ave., praised the report for its objectivity, and noted that it was the first citizen review of the controversial school.

'Notable Features'

The evaluators did praise the small class size and resultant low teacher student ratios which it called 'notable features which contribute to effective learning."

"The closeness of teacher-student relationships, facilitated by the school's small size, is a major contributor to the personal and academic growth of students," the report noted.

But the evaluators—10 East parents—rated the professional staff as more committed to the controversial school than to the students.

"Probably because of their concern for those students who do not appear to be involved at Shabazz, the parents did not rate student involvement and commitment as favorably as they rated the staff involvement," the parents said.

A weakness in the program noted by parents, students, and teachers alike was the lack of adequate supplies, equipment and library facilities.

Hafeman said the report would be carefully evaluated and used as a guide toward making possible improvements in the school.

- recommendations
- examples of strategies and techniques for implementing recommendations

Presenting evaluation results to a group or to an individual provides an opportunity to question the results, discuss their implications, and determine what steps should be taken to use the results. Through dialogue about the results, a constructive plan of action should be worked out to improve the program, make decisions, and/or gain increased support.

A group presentation could use several speakers (e.g., a student, a teacher, an administrator, an evaluator, and a project director) to discuss the effectiveness of the program from different points of view. Or various individuals could present the results to constituents other than their own. For example, a teacher could present the results to a teachers' association, a parent to the PTA, a student to the student body, and a superintendent to the school board.

12.8 Audiovisual Presentation.

Evaluation results can be effectively communicated through audiovisual reports as well as written and oral ones. Pictures, transparencies, slides, slide-tape presentations, films, and video tapes can be used to provide the audience with an easy-to-understand summary of the results. Audiovisual materials can also be used to share highlights or key features of the program in an appealing manner. However, most decision makers prefer the print medium to the audiovisual (Brickell 1974). Audiovisual materials are most useful in group settings for formal presentations.

13. Use. How will the evaluation findings be turned into action?

To insure that the evaluation will improve the program being tested, you should develop an action plan for using the results of the evaluation. The following *Use Checklist* cites six points to consider when planning to use evaluation results.

✓ USE CHECKLIST

Instructions: Survey the six questions on considerations about uses of your evaluation findings, and check (✓) any appropriate responses.

Yes	No		
☐	☐	13.1	Data for decision making. Will the evaluation results be used as a basis for making rational decisions about your program?
☐	☐	13.2	Type of decision. Are you clear about the type of decisions that the evaluation results should influence?
☐	☐	13.3	Public Relations/Lobbying. Will the evaluation results be used to keep constituents informed of program outcomes in order to gain support for the program or to influence future decisions and legislation regarding career education?
☐	☐	13.4	Useful recommendations. Are the evaluation recommendations written in a manner that will facilitate their use?
☐	☐	13.5	Personal barriers and facilitators. Have you examined the various personal reasons that individuals may have for adopting or resisting the evaluation results?
☐	☐	13.6	Organizational barriers and facilitators. Have you examined the various organizational barriers to and ways to facilitate use of the evaluation results?

13.1 Data for decision making. Will the evaluation results be used as a basis for making more rational decisions about your program?

Evaluation is not an end in itself. The results should be used as part of policy planning and management. A major purpose of evaluation is to provide a basis for making rational rather than intuitive decisions. Most decision makers would like to have accurate information to help them make better decisions. Patton (1975) found that evaluation results are frequently used by decision makers but not often in the clear-cut and organization-shaking ways that social scientists sometimes believe these results should be used. Decision makers can use evaluation results to:

13

- resolve doubts, confusions, and misunderstandings that different audiences may have about the program
- provide additional knowledge to support already known facts, to confirm observations, or to verify suspicions
- supplement professional judgment
- fill in gaps with pieces of information about the program
- influence subsequent decisions on related programs
- provide documented evidence of program success and failures.

Problems result not only when evaluation results are disregarded but also when the evaluation results are misused. Data is prevented from influencing decisions by numerous kinds of misuse, including the following three frequently found kinds:

- "Fuddling." An ancient and revered skill of accomplished bureaucrats is "fuddling," the device of shuffling reports and recommendations by asking for signatures and clarifications without ever actually implementing any of the recommendations.
- "Misuse of Evaluation." Evaluation results may sometimes be used to justify conservative predecisions rather than progressive improvement of programs.
- "Overemphasis on evaluation." On occasion, evaluation results can actually be overemphasized. Muskin (1973) has documented cases in which decisions to terminate programs were based on evaluations that had unsound methods or faulty conceptualization.

13.2 Type of decision. Are you clear about the type of decision that the evaluation results should influence?

The decisions to be influenced by evaluation data include four types: planning decisions, structuring decisions, implementing decisions, and "recycling" decisions. Figure 11 illustrates these four types of decisions and categorizes them by whether they are concerned with intended ends or means or actual ends or means.

Intended ends are the objectives and planned outcomes of a program. Actual ends are the actual outcomes and results of a program. Intended means are the planned procedures for implementing a program. Actual means are the ways the program is actually implemented.

Figure 11

Type of Decisions *

	Intended	Actual
Ends	**Planning Decisions** To determine objectives What needs should this program meet?	**Recycling Decisions** To judge and react to attainments Does this program work or not?
Means	**Structuring Decisions** To design procedures How can these needs be met most effectively and efficiently?	**Implementing Decisions** To utilize, control and refine procedures How can this program be improved?

*Adapted from Stufflebeam (1972).

13.3 Public Relations/Lobbying. Will the evaluation results be used for public relations or lobbying?

In addition to decision making, evaluation results can be used for public relations or for lobbying:

- to keep constituents informed of the status and outcomes of career education locally, statewide, or nationally
- to gain support for a particular program or for career education in general
- to influence future decisions and legislation not directly related to the single program being evaluated

The results of an evaluation can be a defense of the status quo or a potent impetus for change. Listed below are some guidelines for shaping compelling evaluation results to lay before constituents such as parents, boards of education, advisory councils, and legislators.

1. Illustrate the outcomes of the program with examples of how individual students, teachers, and other participants benefitted from the program.

13

2. Compare the successes and weaknesses of your career-education program to those of other programs

3. Stay abreast of the various political developments that influence your program. When possible, illustrate how features of your program relate to

   – concerns expressed by legislatures or other governance bodies

   – emerging federal, state, or local priorities

   – areas of interest to the key audiences for the evaluation

   – new or pending legislation

   – new programs and projects

13.4 Useful recommendations. Are the evaluation results and recommendations written in a manner that will enhance their significance and facilitate their use?

Evaluation results and recommendations should contain those attractive elements of feature and format that will facilitate their use. Evaluation recommendations are more likely to be implemented when:

- they are not overly time consuming to implement
- they are not overly costly to implement
- they are flexible and have alternatives
- they call for incremental change rather than total revamping of the program
- they place the program staff in a central role (high profile) but do not make unreasonable demands on them
- they are short and concise yet complete
- they are easily communicated, not complex

13.5 Personal barriers and facilitators. Have you examined the various personal reasons that individuals may have for adopting or resisting the evaluation results?

There are often reasons, based both in fact and fancy, for resisting evaluations. In any group of individuals there will be considerable variation in their willingness to adopt evaluation recommendations. To facilitate the use of evaluation results, you should identify those

individuals who will support and use evaluation results. These individuals can in turn help communicate the implications of the evaluation to those who are more resistant to change. It should be noted that some personalities are inherently resistant to using data to make decisions. In some cases, it will be impossible to change an intuitive decision maker into a rational one.

Some traits that may differentiate users from nonusers of evaluation results are highlighted below.

Characteristics of a User of Evaluation Results	Characteristics of a Non-User of Evaluation Results
makes rational decisions based on logic and systematic information	makes intuitive decisions based on personal reaction, informal interpretation, and insight
is influenced by group opinion	is more confident in own way of doing things than others' opinions
takes risks and is open to change	is satisfied with the status quo
is familiar with the uses of evaluation	is unaware that evaluations can be useful
finds the evaluation approach consistent with personal values	finds the evaluation approach in conflict with personal values
views a personal reward through the evaluation (e.g., gain in power through having information that others don't)	views a personal penalty through the evaluation (e.g., loss of job status)

Personal Barriers to Using Evaluation

Both frontstage and backstage concerns about the evaluation should be considered. Because evaluation is often threatening, irrational as well as rational resistance may surface. Some of the reasons why a resister opposes evaluations are highlighted below (adapted from Davis and Salasin, 1975).

- views evaluation as somewhat unclear or confusing
- sees *limited* personal help or benefits from the evaluation
- sees *little* of value to be gained by the project from the evaluation

13

- views evaluation approach as a poor fit with the program
- views the evaluation approach as a poor fit with the style and values of the audience
- sees the evaluation as invalid in basic concept and methods
- foresees negative consequences of the evaluation
- feels it is a poor or inappropriate time to be evaluated (e.g., too soon, too late, too unimportant, etc.)

Reducing Barriers

Despite the many reasons for reluctance to use the results of an evaluation, there are a number of possible ways to reduce the resistance, and eleven of these are listed below:

- Appraise resistances deemed to be rational and consider restating the evaluation results in a more diplomatic manner
- Use advisory groups who represent opposing factions
- Approach implementation of the evaluation slowly; introduce new elements a few at a time, beginning with the least disturbing
- Compromise and settle on partial change if necessary
- Use listening as a deliberate approach; allow persons to express their resistance
- Employ rational persuasion
- Use selective individual counseling for those who have unique problems or strong resistance
- Resolve complex resistance through group dynamics (e.g., values clarification, T-groups, open discussion at retreats, etc.)
- Plan, direct, tangible rewards for persons instrumental to using the evaluation results
- Communicate or share the benefits from implementing the evaluation results with persons concerned
- Seek and use direct and personal support from the top of the organization

13.6 Organizational barriers and facilitators. Have you examined the various organizational barriers to and ways to facilitate use of the evaluation results?

Forces for and against use of evaluation results can often be numerous. In addition to the personal barriers and facilitators outlined above, there can also be—depending on the health of the organization—organizational barriers and facilitators. This

section describes facilitators, and it provides guidelines for overcoming the barriers and strengthening the facilitators.

Organizational Facilitators

Some organizations are healthier than others and tend to be more responsive to evaluation results. Some characteristics of a healthy organization, one that is receptive to evaluation, are outlined below (adapted from Davis and Salasin, 1975):

- Organizational goals are clear and written down.
- Administration is supportive.
- Communication is open.
- Colleagues enjoy mutual support.
- Participation in decision making is widespread.
- Morale is high.
- Adequate time is allowed for reflection and for testing new ideas.
- Power is decentralized and distributed.
- Organization is reasonably affluent and secure.
- Constituents are supportive.
- There is a history of successful innovations.
- The chief decision maker has a reasonably short tenure.
- Staff members are rewarded for performance rather than status.
- The highest ranking official in the organization is a self-renewing, goal-oriented person.

Strengthening Organizational Facilitators

Evaluation results will meet greater support in healthy organizations. Therefore, it is advantageous to improve an organization's health in as many of the above areas as possible. Some steps for strengthening organizational facilitators are:

- advocating self-renewal of staff and employees
- encouraging experimentation and the right to make mistakes

- encouraging attendance at meetings, discussions, "brown baggers," etc.
- arranging rewards and recognition related to performance
- informing concerned individuals of the progress of the evaluation and periodically asking for their feedback

Summary

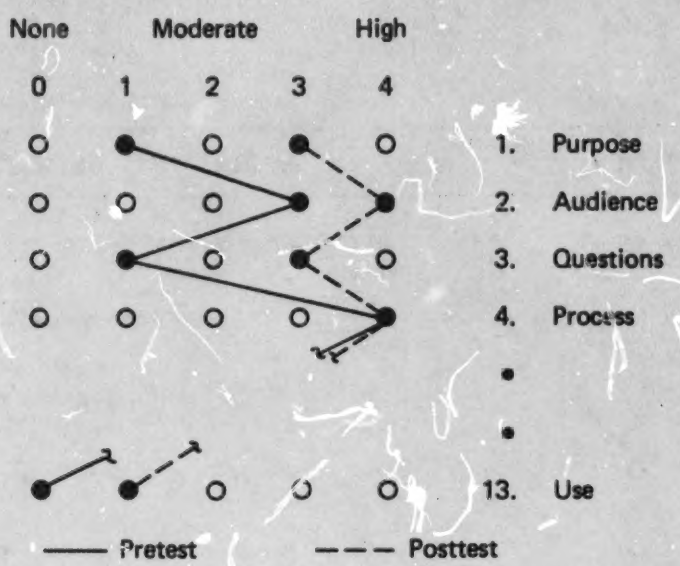
Systematic steps should be planned for facilitating use of the evaluation results and recommendations. The process of planning for use of evaluation should include:

- building a commitment to draw upon evaluation results for making rational data-based decisions
- deciding what types of decisions and what specific decisions should be influenced by the evaluation results
- planning broad uses of the evaluation results, such as upgrading public relations, lobbying, influencing legislation, and influencing future program decisions
- designing the evaluation results and recommendations to be as compelling and useable as possible
- developing sensitivity to the expectations and resistances of individuals who are expected to use the evaluation results so their needs may be accommodated
- evaluating the organizational setting for the evaluation so barriers can be overcome and strengths reinforced

EVALUATION PROFILE

CURRENT COMPETENCY	EVALUATION QUESTIONS
O O O O O	1. Purpose. What types of evaluation are needed?
O O O O O	2. Audience. Who should the evaluation serve?
O O O O O	3. Questions. What specific questions should the evaluation answer?
O O O O O	4. Process. How will the evaluation be accomplished?
O O O O O	5. Staff. What type of evaluation services, if any, should be used?
O O O O O	6. Responsibility/Authority. What are the respective roles and responsibilities of program staff and evaluators?
O O O O O	7. Uniqueness. What unique features of career education influence its evaluation?
O O O O O	8. Planning Standards. What are the characteristics of a "good" evaluation plan?
O O O O O	9. Instrument Standards. What are the characteristics of a "good" evaluation instrument?
O O O O O	10. Politics. What political factors might affect use of the evaluation results?
O O O O O	11. Report Standards. What are the characteristics of a "good" evaluation report?
O O O O O	12. Dissemination. What techniques will be used to disseminate the findings?
O O O O O	13. Use. How will the evaluation findings be turned into action?
None Moderate High 0 1 2 3 4	

Compare your pretest profile from page 5 of the handbook with your posttest profile. Enter your pretest ratings on the posttest profile using a different color pen. Connect the circles to form your pre- and post profiles as illustrated below.



Calculate the amount of change in your knowledge of each of the thirteen topics. Don't be surprised if you find some ratings lower on the post-test than the pretest. An increased awareness of the complexity of the issues involved in evaluation may serve to increase your perception of how much more there is to learn. The comparison of profiles is primarily useful to help you identify knowledge areas that are still below your expectations and areas that you now feel fairly comfortable performing. You may want to review units or use additional resources to learn more about topics that are still below your expectations.

This handbook was designed to stimulate your awareness of the many issues, activities and headaches that go into making an evaluation top-notch. Many of these issues are easier to talk about than to actually integrate into daily professional activities. In other words, it is much easier to analyze what *needs* to be done than to implement ideas in a world of constraints, changing signals, interpersonal conflicts, and heavy workloads. This handbook is not meant to overwhelm you with all the issues to be considered in an evaluation. Select a few new ideas that appeal to you and try to act on them in your next evaluation. Remember, changes are more frequent and lasting when they are incremental (small steps), uncomplicated, and flexible. Begin to think of situations where you can apply your new knowledge.

This handbook is a comprehensive sourcebook about the key ingredients of an evaluation. But, because the handbook provides breadth of information it gives only a taste or survey of many ideas rather than in-depth knowledge and detailed procedures. Many other reference books, articles, and reports are cited throughout the handbook. You are encouraged to turn to these materials to investigate topics of interest in more detail.

100

SELECTED BIBLIOGRAPHY

Adams, Jerry. "Guidelines for Beginning Evaluators." and "How an Administrator Can Use an Evaluator." In *An Introduction to Evaluation.* Edited by William E. Loadman. Columbus, Ohio: Nisonger Center, The Ohio State University, 1976.

Adams, Kay A. *Florida Assessment of Needs in Career Education.* Tallahassee, Fla.: Division of Vocational Education, Florida State Department of Education, 1977.

Adams, Kay A., and others. *Career Planning Support System: Manual for Writing Behavioral Objectives.* Columbus, Ohio: The Center for Vocational Education, The Ohio State University, 1977.

Basic Learner Outcomes for Career Education. Austin, Tex.: Texas Education Agency, 1973.

Brickell, Henry M. *The Influence of External Political Factors on the Role and Methodology of Evaluation.* Research Evaluation Development Paper Series. Portland, Ore.: Northwest Regional Educational Laboratory, 1975.

Brickell, Henry M., and others. *Data for Decisions.* New York: Policy Studies in Education, March, 1974.

Campbell, Donald T., and Julian C. Stanley. *Experimental and Quasi-Experimental Designs for Research.* Chicago: Rand McNally and Company, 1967.

Career Development: Goals and Performance Indicators. 2nd ed. Lansing, Mich.: Michigan Department of Education, 1974.

Chuang, Ying C. "Zero Based Budgeting for Voc Ed." *American Vocational Journal.* April 1977.

Cook, Desmond L. "Have You Been Audited Lately?" *Theory into Practice,* 8, No. 1 (February, 1974), 31-41.

Davis, Howard R., and Susan E. Salasin. "The Utilization of Evaluation." In *Handbook of Evaluation Research.* Edited by Elmer L. Struening and Marcia Guttentag. 2 vols. Beverly Hills, Calif.: Sage Publications, Inc., 1975.

Developmental Program Goals for the Comprehensive Career Education Model. Columbus, Ohio: The Center for Vocational Education, The Ohio State University, 1975.

Eisner, Elliot W. "The Perceptive Eye: Toward the Reformation of Educational Evaluation." Invited address at the American Educational Research Association, Washington, D.C., March 31, 1975.

Florida State Department of Education. *Career Education: An Introduction.* Tallahassee, Fla.: The Career Education Center, Florida State University, September, 1975.

Gessner, Arlys E. *Statewide Survey of Needs for Career Education.* Madison, Wis.: Wisconsin Department of Public Instruction, 1976.

Hoyt, Kenneth B. *Monographs on Career Education: Perspectives on the Problem of Evaluation in Career Education.* Washington, D.C.: Office of Career Education, U.S. Department of Health, Education and Welfare, 1975.

Klein, Stephen, and others. *Educational Program Auditing.* Training Package. Los Angeles: Center for the Study of Evaluation, University of California, 1971.

Lippitt, Gordon L. "Criteria for Selecting, Evaluating, and Developing Consultants." *Training and Development Journal,* August, 1974, pp. 12-17.

McCaslin, N. L. *Cost Saving Practices for Vocational Education.* Proposal. Columbus, Ohio: The Center for Vocational Education, The Ohio State University, 1977.

McCaslin, N. L., and Janice Lave. *Needs Assessment and Career Education: An Approach for States.* Columbus, Ohio: The Center for Vocational Education, The Ohio State University, 1976.

McLaughlin, Donald H. *Career Education in the Public Schools 1974-75: A National Survey.* American Institutes for Research. Palo Alto, Calif.: U.S. Government Printing Office, 1976.

Michigan Department of Education. *The Nature, Status, and Scope of Career Education Programs.* Lansing, Mich.: Michigan Department of Education, 1976.

Muskin, S. J. "Evaluations: Use with Caution." *Evaluation*, 1, No. 2 (1973), 30-35.

Patton, Michael Q., and others. *In Search of Impact: An Analysis of the Utilization of Federal Health Evaluation Research.* Minneapolis, Minn.: Minnesota Center for Social Research, University of Minnesota, 1975.

Sanders, James R., and Dean H. Nafziger. *A Basis for Determining the Adequacy of Evaluation Designs.* Kalamazoo, Mich.: Evaluation Center, Western Michigan University, April, 1976.

Scriven, Michael. "Pros and Cons and Goal Free Evaluation." *Evaluation Comment.* 3, No. 4 (December, 1972), 1-4.

Stake, Robert. *Evaluating the Arts in Education: A Responsive Approach.* Columbus, Ohio: Charles E. Merrill Publishing Company, 1976.

Stake, Robert. "Program Evaluation Particularly Responsive Evaluation." Occasional Paper No. 5. Kalamazoo, Mich.: Evaluation Center, Western Michigan University, 1975.

Stake, Robert, and Craig Gjerde. *An Evaluation of TCITY, the Twin City Institute for Talented Youth.* Kalamazoo, Mich.: Evaluation Center, Western Michigan University, 1971.

Stenner, A. Jackson. *An Overview of Information Based Evaluation for Career Education: A Design Procedure.* Information Based Evaluation Series, Book 1. Arlington, Va.: The Institute for Development of Educational Auditing, 1972.

Stufflebeam, Daniel L. "Meta Evaluation." Occasional Paper No. 3. Kalamazoo, Mich.: Evaluation Center, Western Michigan University, 1974.

Stufflebeam, Daniel L., and others. *Educational Evaluation and Decision Making.* Itasca, Ill.: F.E. Peacock Publishers, Inc., 1971.

Texas Education Agency and Partners in Career Education. *Survey* (of 7-12 grade students career education development). Austin, Tex.: Texas Education Agency, 1975.

Walker, Jerry P. "AIDE: A Quality Assurance Strategy for Educational R&D." In *Strategies for Product Evaluation.* Trenton, N.J: Educational Technology Press, 1973.

Walker, Jerry P. "Installing an Evaluation Capability in an Educational Setting: Barriers and Caveats." Paper presented at the AERA Annual Meeting, Chicago, Spring, 1972. ED 063 339.

Watkins, Richard W., and C. Lynn Jenks. *Values and Information: An Approach to Evaluation Planning.* San Francisco: Far West Laboratory, November, 1976.

Wentling, Tim L., and Tom E. Lawson. *Evaluating Occupational Education and Training Programs.* Boston: Allyn and Bacon, Inc., 1975.

Witkins, Ruth Belle. *An Analysis of Needs Assessment Techniques for Educational Planning at State, Intermediate, and District Levels.* Hayward, Calif.: Office of the Alameda County Superintendent of Schools, 1975.

Worthen, Blaine R. *A Look at the Mosiac of Educational Evaluation and Accountability.* Research Evaluation Development Paper Series. Portland, Ore.: Northwest Regional Educational Laboratory, 1974.